YOUNG WOMEN ATHLETES' SELF-CONSCIOUS EMOTIONS AND SELF-COMPASSION

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ABSTRACT

Athletic environments subject athletes to evaluation not only on performance, but also on appearance (Krane et al., 2001). This likely facilitates self-conscious emotions, which have a self-evaluative focus (Leary, 2004; Tracy & Robins, 2004). However, self-compassion might serve as a buffer against the self-conscious emotions by countering self-evaluative processes. The purpose of this study was to explore the relations between self-conscious emotions (i.e., shame, guilt, authentic pride, and hubristic pride) and self-evaluative thoughts and behaviours (i.e., social physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation) for young women aged 13 -18 involved in high school sport (*N* = 151). The role of self-compassion as a moderator variable between self-conscious emotions and self-evaluative thoughts and behaviours was also explored. Consistent with the contention that shame and hubristic pride may be less adaptive than guilt and authentic pride, shame and hubristic pride showed positive relations with fear of failure (*r* = .26 and .20, respectively) and fear of negative evaluation (*r* = .21 and .21, respectively). Hubristic pride was also positively related to objectified body consciousness (*r* = .32). Conversely, guilt and authentic pride showed negative relations with objectified body consciousness (*r* = -.20 and -.34, respectively). Authentic pride also showed negative relations to fear of failure (*r* = -.38) and fear of negative evaluation (*r* = -.37). Self-compassion was negatively related to shame (*r* = -.32) and positively related to authentic pride (*r* = .42), but had no relation with guilt and hubristic pride. Self-compassion was also negatively related with social physique anxiety (*r* = -.39), objectified body consciousness (*r* = -.34), fear of failure (*r* = -.38), and fear of negative evaluation (*r* = -.37). Additionally, self-compassion was found to explain variance beyond self-esteem on objectified

body consciousness ($\Delta R^2 = .07$), fear of failure ($\Delta R^2 = .11$), and fear of negative evaluation ($\Delta R^2 = .06$). A significant interaction effect was found with self-compassion on the relation between shame and obligatory exercise, suggesting that even moderate levels of self-compassion may help to buffer some negative effects of shame. Taken together, these results suggest that self-compassion might be an important resource for young women involved in sport in managing self-conscious emotions.

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Abbreviation	
FNE	Fear of Negative Evaluation Scale.
OBC-Youth	Objectified Body Consciousness Scale for Youth
OEQ	Obligatory Exercise Questionnaire
PFAI-S	Performance Failure Appraisal Inventory
RSES	Rosenberg Self-esteem Scale
SCS	Self-Compassion Scale
SPAS	Social Physique Anxiety Scale
TOSCA-A	Test of Self-Conscious Affect for Adolescents

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CHAPTER 1

1.1 INTRODUCTION

Sport is a unique context that presents many issues, challenges, and pressures for athletes. With ample opportunity for evaluation, not only in terms of performance but also on appearance, many athletes find themselves struggling with issues surrounding the body. Oftentimes, appearance and performance goals are difficult to balance. This performance-appearance struggle is especially salient for young women athletes. Adolescent athletes in particular face many challenges, as they are dealing with changing bodies, negotiating expectations regarding appearance and performance, and developing a personal identity, in addition to striving to become a better athlete. It is important for adolescents to have the resources and skills to deal with the pressures they face, as concerns surrounding physical appearance and other body characteristics often dictate adolescents' sense of self-worth and have the potential to affect overall well-being (Dacey & Kenny, 1994; Fox, 1997; Harter, 1999).

Adolescence is a time of constant evaluation and comparisons as young people attempt to negotiate identity and social status (Brown & Lohr, 1987; Harter, 1990). This can promote attention and evaluation regarding oneself, which in turn elicits the experience of self-conscious emotions. The self-conscious emotions, in particular guilt, shame, and pride, may be especially relevant to young women athletes given the evaluative nature of sport on both performance and

appearance. However, self-compassion has the potential to serve as a buffer against the self-conscious emotions, as self-compassion might counter the self-evaluative process involved in the experience of self-conscious emotions. The present study seeks to explore the relations between different self-conscious emotions and various sport relevant cognitions and behaviours that involve self-evaluation[1] (i.e., social physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation). Additionally, self-compassion as a predictor of variance beyond self-esteem will be explored, along with the moderating effects of self-compassion on the relation between the self-conscious emotions and self-evaluative thoughts and behaviours.

1.2 REVIEW OF THE LITERATURE

1.2.1 Young women athletes

Many young women participate in sport at some level. In Western countries, the majority of children and youth participate in organized sport at some point during their childhood or adolescence (Telama, Yang, Hirvensalo, & Raitakari, 2006). During the 2007-08 school year, in Saskatoon alone there were over 4000 young women in grades 10 to 12 eligible to participate in high school sport (SHSAA, 2008). When the surrounding area is included, that number increases to over 6000 young women (SHSAA, 2008)[2]. Thus, high school sport participation is a common opportunity for many young women during the adolescent years[3]. However, despite these opportunities, research has demonstrated a decline in participation in sport (Stubbe, Boomsma, & de Geus, 2005) and physical activity (Pate, Long, & Heath, 1994; Telama, Laakso,

[1] From this point onward, "sport relevant thoughts and behaviours involving self-evaluation" will be referred to as "self-evaluative thoughts and behaviours".
[2] "Surrounding area" refers to the two rural school divisions around Saskatoon that participated in this study (Horizon School Division and Prairie Spirit School Division).
[3] Actual participation statistics regarding the number of eligible young women who participate in high school sport are not kept due to the practicality of sorting out the high number of young women who participate in multiple high school sports (J. Colquhoun, personal communication, June 27, 2008)

Yang, & Viikari, 1997; Telama & Yang, 2000) during this period of life. This is unfortunate, as Fraser-Thomas, Côté, and Deakin (2005) highlight that sport has much to offer, not only physically (e.g., cardiovascular fitness, skill development, improved muscular strength, endurance, and flexibility), but also psychologically (e.g., emotional development, subjective well-being), socially (e.g., leadership skills, peer relationships), and intellectually (e.g., cognitive development).

Sport Canada, in partnership with the Canadian government, has identified sport participation as a key priority area for government action and has recently taken initiatives to increase ongoing sport participation, recruit new participants, and reduce dropout rates (Sport Canada, 2004). Its main goal is to have a significantly higher proportion of Canadians participating in all levels and all forms of sport activities by 2012 (Sport Canada, 2004). One target population is youth, in particular young women (Sport Canada, 2004). It is recognized that "sport offers important avenues to physical activity to children and youth, [and] it must and can be an important part of the fight against physical inactivity" (Sport Canada, 2004, p. 8). Research has suggested that participation in sport and physical activity in childhood and adolescence significantly predict physical activity in young adulthood (Telama et al., 1997; Telama, Leskinen, & Yang, 1996; Telama, Yang, Laakso, & Viikari, 1997). In fact, sport participation in adolescence has been shown to be a greater predictor of adult physical activity than either education level or parental socio-economic status (Scheerder, Thomis, Vanreulsel, Lefevre, Renson, Evnde, & Beunen, 2006).

Sport promotion and the goal of creating positive sport environments can be aided by understanding young women's emotional experiences in sport. Not only do many athletes struggle with attaining a body that will help them perform at their best while still trying to

conform to an increasingly specific body ideal (Greenleaf, 2002), but athletic environments provide a context for athletes to be evaluated on both appearance and performance (Krane, Stiles-Shipley, Waldron, & Michalenok, 2001). In addition to their physical skills, athletes' bodies are often on display (Krane et al., 2001). This challenge with evaluation is intensified by the cultural ideals surrounding the body (Greenleaf, 2002) and the high achieving mentality of many athletes (Leichner, 1986). Women athletes face pressures to improve their performances as well as their physiques while sociocultural forces promote an often unrealistic body ideal (Beals & Manore, 1994). In order to create an athletic environment that better promotes all of the positive aspects that sport has to offer, a more complete understanding of young women's emotional experiences in sport is essential, especially issues surrounding the body.

Young women athletes face unique pressures and challenges in regards to their bodies. It is recognized that athletic participation has the potential to put additional pressure on adolescents surrounding the body, especially in terms of attaining leanness (Rainey, McKeown, Sargent, & Valois, 1998). As such, young women athletes are a population that may be particularly at-risk for body-related concerns. The high self-expectations, constant comparisons, and perfectionistic tendencies of many athletes, along with the characteristic rigid approach to reaching goals, could lead to problems, such as engaging in unsafe weight control practices (Rainey et al., 1998). This is becoming increasingly evident as the prevalence of eating disorders and obsessive concern over body weight in women athletes is on the rise in recent times (Beals & Manore, 1994).

Additionally, adolescence is a time of increasing self-awareness and self-consciousness among young women (Rosenberg & Simmons, 1975). Body image issues and body dissatisfaction are prevalent in adolescence in Western culture (Neumark-Sztainer, Story, Hannan, Perry, & Irving, 2002; Ricciardelli & McCabe, 2001), especially among young women

(Rainey et al., 1998). High levels of body dissatisfaction and poor body image during the adolescent period are often associated with the development of eating disturbances and disorders, body image problems, low self-esteem, depression, weight cycling, obesity, exercise dependence, and other health-related issues later in life (Attie & Brooks-Gunn, 1989; Birch & Fisher, 1998; Cash, 2002; Keery, van der Berg, & Thompson, 2004; Smolak, Levine, & Schermer, 1999; Stice, 2002).

Research has identified a number of body issues experienced by athletes. High-performance athletes between the ages of 13 and 30 have been shown to participate in more diets and be more body and weight pre-occupied than their non-athletic counterparts (Davis, 1992). Also, athletes have been found to be at a high risk for eating disorders (Black, 1991), sharing many of the same traits, such as high self-expectations, an obsessive and rigid approach towards reaching goals, and perfectionism, found in persons with an eating disorder (Leichner, 1986). Clearly, athletes are not immune to body-related concerns, and young women athletes may be experiencing unique pressures surrounding the body in terms of appearance, performance, and societal ideals, which potentially are amplified due to the high-achieving tendencies of many athletes.

Research in the sport domain has also highlighted that youth sport is characterized by high drop-out rates (Telama et al., 2006); and trends suggest that young women's physical activity levels as a whole tend to decline as they move through adolescence (Caspersen, Pereira, & Curran, 2000). It has been suggested that body image might impact youth physical activity; however, how it is impacted is unclear (Heinberg, Thompson, & Matzon, 2001). Research with young women during the adolescent years has highlighted that body image concerns can present an obstacle to physical activity participation (Olafson, 2002; Taylor et al., 1999). However,

while body image concerns might act as a barrier to physical activity, low body satisfaction could also motivate youth to increase their physical activity (Neumark-Sztainer, Goeden, Story, & Wall, 2004). Also, adolescents who are physically active tend to have more favorable physical self-esteem than adolescents who are less physically active or inactive (Altintas & Asci, 2008). Regardless, it is important that we attempt to create positive, healthy sport experiences, as sport is often a major source of physical activity for children and youth (Sport Canada, 2004). Additionally, keeping young women involved in sport may help to promote lifelong physical activity. A recent longitudinal study supports that persistent and regular participation in youth sport is a significant predictor of adult physical activity (Telama et al., 2006). There are a host of other studies suggesting that sport participation during one's youth can predict adult physical activity (Curtis, McTeer, & White, 1999; Engstrom, 1991; Paffenberger, Hyde, Wing, & Steinmetz, 1984; Powell & Dysinger, 1987; Tammelin, Nayha, Hills, & Jarvelin, 2003). Therefore, it is important to ensure that youth, especially young women, are having positive sport experiences, setting the stage for a lifetime of physical activity.

1.2.2 Self-conscious emotions

The potential for sport to create an atmosphere of evaluation, not only in terms of performance, but also appearance, likely facilitates the experience of self-conscious emotions. Embarrassment, social anxiety, pride, guilt, and shame constitute the self-conscious emotions, which share a focus on evaluation (Leary, 2004). Self-conscious emotions always involve a self-evaluative process through self-representations and self-awareness (Tracy & Robins, 2004). The experience of other basic emotions can, at times, involve self-evaluation, but it is not required (Tangney & Dearing, 2002). While Tracy and Robins (2004) identified self-representation as a necessary antecedent for the experience of self-conscious emotions, Leary (2004) contended that

people experience self-conscious emotions based on how they perceive they are being evaluated by others, not by how they are evaluating themselves (Leary, 2004). Nevertheless, both views involve the underlying component of evaluation.

The achievement domain, which includes sport, is a common elicitor of shame and guilt (Tracy & Robins, 2006). The self-conscious emotions experienced by athletes, along with the implications of these emotions, would likely have an effect not only on the athlete's performance, but also on sport enjoyment, persistence in sport, and ability to cope with sport-related issues. Helping athletes develop the skills to make these emotions function effectively would likely promote a more positive sport experience. It seems as though the emotions of shame and hubristic pride function less adaptively than guilt and authentic pride (Tracy & Robins, 2007). The key is providing athletes with the skills and resources to successfully manage these emotions. In order to reach this objective, more must be understood about the role of the self-conscious emotions of guilt, shame, hubristic pride, and authentic pride in sport.

While shame and guilt are often used interchangeably in everyday language, they are conceptually and empirically distinct. Shame arises from a negative self-evaluation (Tangney, 1990) and can result from feeling that we have not lived up to the standards or goals we have set for ourselves (Lewis, 1971; Lewis & Haviland-Jones, 2002), failure in moral action (Tangney, 2002), or not meeting the moral, competence, or aesthetic expectations of society (Orth, Berking, & Burkhardt, 2006; Smith, Webster, Parrott, & Eyre, 2002). With the goals, decisions, and expectations from multiple sources involved in athletics, it is likely that athletes often have to deal with feelings of shame. Shame can be very painful, as the entire self, not just a particular aspect, is scrutinized and negatively evaluated (Tangney, 1990). Shame is often regulated by attempting to make external attributions to deal with the painful emotion, such as blaming others

for failure (Lewis, 1971; Scheff, 1998). It is important to note that while shame is regulated using an external source, it is still the result of an internal, stable, and controllable attribution.

While shame involves a negative evaluation of a central aspect of the self, guilt implies a negative evaluation of a specific behaviour (Tangney, 1990). Feelings of guilt involve the perception that someone has done something "bad" or wrong (Tangney, 1990). Individuals experiencing guilt often feel tension, remorse, and regret (Tangney & Dearing, 2002). The person experiencing guilt may feel bad for the moment, but his/her self-concept and identity remain relatively intact (Tangney, 1990). Effort attributions for failure often result in guilt (Russell & McCauly, 1986; Weiner, Russell, & Lerman, 1978). When one is experiencing guilt, the focus usually turns to reparative actions, such as confessing, apologizing, undoing, or repairing, which suggests that aspects of the self can be changed (Barrett, 1995; Doosje, Branscombe, Spears, & Manstead, 1998; Tangney, 1990; Tracy & Robins, 2004). However, guilt-prone individuals have also been shown to respond by making internal attributions, resulting in more guilt (Tracy & Robins, 2006).

The distinguishing feature of guilt and shame is the stability and controllability of the attribution. Internal, uncontrollable, and presumably stable attributions for failure are associated with shame, while internal, controllable, unstable attributions are associated with feelings of guilt (Tangney, 1990; Tracy & Robins, 2006). For example, a poor performance attributed to ability would result in shame, whereas a poor sport performance based on effort would result in guilt (Tracy & Robins, 2004). Additionally, shame also prompts a concern with others' evaluation of the self[4], whereas guilt promotes concern with one's effect on others (Tangney & Dearing, 2002).

[4] The present study is based in self-conscious emotion theory (Tracy & Robins, 2004), which conceptualizes that "a sense of self, as conceived by self theorists since James (1890), includes an ongoing sense of self-awareness (the "I"

Shame appears to be less adaptive than guilt (Tracy & Robins, 2007). Anger, hostility, social anxiety, self-consciousness, fear of failure, and a diminished capacity for empathy have been associated with shame (Chandler-Holtz, 1999; Covert, Tangney, Maddux, & Heleno, 2003; Darvill, Johnson, & Danko, 1992; O'Connor, Berry, & Weiss, 1999; Schaefer, 2000; Tangney, Burggraf, & Wagner, 1995; Tangney, Wagner, Barlow, Marschall, & Gramzow, 1996; Tangney, Wagner, Fletcher, & Gramzow, 1992). Experiencing shame can result in a considerable shift in self-perception, fostering a sense of worthlessness and powerlessness (Tangney, 1990). Most people aim to remove themselves from these feelings, and, as a result, shame often leads to escapist behaviours (Tangney et al., 1995), and potentially maladaptive withdrawal from interpersonal experiences (Tangney, 1990). Shame-proneness has also been negatively correlated with the quality of self-generated solutions to interpersonal problems, self-efficacy for implementing those solutions, and the expected effectiveness of the solutions (Covert et al., 2003). Individuals experiencing shame may hold a set of beliefs about themselves that make it difficult to use the skills they have (Covert et al., 2003).

Conversely, guilt-proneness is positively correlated with quality of solutions, self-efficacy for implementing the solutions, the expected effectiveness of the solutions, and the desire to resolve interpersonal conflict (Covert et al., 2003). Guilt has the potential to be more adaptive than shame, as it distinguishes the self from behaviour, which protects the self from global devaluation while providing the opportunity to change the guilt-inducing behaviour and making reparations for past consequences (Tangney & Dearing, 2002). It has been suggested that guilt has the most potential to be maladaptive when fused with shame; therefore, the notion

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self) and the capacity for complex self-representations (the "me" self, or the mental representation that constitute one's identity). Together, these self-processes make it possible for self-evaluations, and therefore self-conscious emotions, to occur" (Tracy & Robins, 2004, p. 105).

of "shame-free guilt" has the most potential for being adaptive (Tangney & Dearing, 2002, p. 117).

As shame is not necessarily maladaptive, guilt is not always adaptive. Moderate levels of both shame and guilt are likely adaptive (Tangney, 1990). For example, the affective experiences of guilt and empathy are critical in the development of moral behaviour (Hoffman, 1982a, 1982b). It is when the emotions are at either extreme end of the continuum that they become problematic (Tangney, 1990). Thus, it is not the intent to eliminate all self-conscious emotions, but rather the key seems to keep them in balance and find ways for individuals to deal with them effectively. An absence of shame and guilt have been theoretically linked to sociopathic and antisocial types of behaviour, while excessive feelings of guilt, and especially shame, have been linked to depression, low self-concept, social withdrawal, and obsessive reactions (Hoblitzelle, 1987; Lewis, 1971; Morrison, 1987; Orth et al., 2006; Prosen, Clark, Harrow, & Fawcett, 1983).

The self-conscious emotion of pride can be elicited in many situations, including sport achievement, as well as in other domains, such as school, grades, exams, work related events/behaviour, relationships, and family (Tracy & Robins, 2007). Similar to the distinction between shame and guilt, two facets of pride are recognized in the self-conscious emotion literature. Authentic, or beta, pride is pride based on one's actions and results from attributions to internal, unstable, controllable causes (e.g., *"I won because I practiced"*; Tracy & Robins, 2007, p. 507). An alternate form of pride, hubristic, or alpha, pride, is pride in the global self and is attributed to internal, stable, uncontrollable causes (e.g., *"I won because I am always great"*; Tracy & Robins, 2007, p. 507). While pride in one's successes has been suggested to promote positive behaviours in the achievement domain (Tracy & Robins, 2007), one must be conscious

of the type of pride being developed. Research suggests development of authentic pride may be more beneficial to the athlete than the less adaptive hubristic pride. Hubristic pride has been negatively associated with self-esteem and more strongly related to narcissism than authentic pride (Tracy & Robins, 2007). In addition, hubristic pride is related to shame-proneness (Tracy & Robins, 2007). Conversely, authentic pride is positively related to self-esteem and is associated with adaptive personality traits such as extraversion, agreeableness, conscientiousness, and emotional stability (Tracy & Robins, 2007). Authentic pride has been shown to be negatively associated with shame-proneness (Tracy & Robins, 2007); thus, developing authentic pride could serve as buffer against the less adaptive self-conscious emotion of shame. Clearly, authentic pride appears to offer more to the athlete in terms of self-esteem and positive personality traits, as well as developing constructive goals and protection against shame. However, the construct of pride has not been extensively explored in the context of youth sport.

Taken together, the literature suggests that little is known about the proneness of athletes to experience different self-conscious emotions. Given that sport provides the evaluative component necessary for elicitation of the self-conscious emotions, it seems as though athletes must learn to deal with the experience of self-conscious emotions. Additionally, as discussed in the following section, it is likely that the self-conscious emotions are related to various cognitions and behaviours, particularly those involving self-evaluation.

1.2.3 Self-conscious emotions and self-evaluative thoughts and behaviours

Exploring the relations between the self-conscious emotions of guilt, shame, and pride with outcomes that involve a self-evaluative process could provide important insight into the implications of young women's experiences of self-conscious emotions in sport. Social

physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation may be particularly relevant thoughts and behaviours linked to the self-conscious emotions as they share an evaluative component. These outcomes were chosen to represent a variety of perceptual (i.e., social physique anxiety) and behavioural (i.e., obligatory exercise) constructs relevant to evaluation of body image (i.e., objectified body consciousness), and performance (i.e., fear of failure), or potentially both (i.e., fear of negative evaluation).

1.2.3.1 Social physique anxiety

Social physique anxiety is defined as "a subtype of social anxiety that occurs as a result of the prospect or presence of interpersonal evaluation involving one's physique" (Hart, Leary, & Rejeski, 1989, p. 96). Self-presentation, which is the process by which people attempt to control the perceptions others form of them (Leary, 1992), appears to be significant in sport and exercise environments (Leary, 1992), as women may perceive that both their physique and skill level are being evaluated in those contexts (Krane et al., 2001). This can result in self-presentational concerns, such as social physique anxiety (Krane et al., 2001). It is important to further understand social physique anxiety as it is often linked to maladaptive behaviours and cognitions, such as unhealthy eating and exercise behaviours (Johnson, Diehl, Petrie, & Rogers, 1995; McDonald & Thompson, 1992) and negative perfectionism (Haase, Prapavessis, & Owens, 2002). Additionally, social physique anxiety may have particular implications for young women athletes, as it has been shown to be related to body dissatisfaction and disordered eating in this population (Reel & Gill, 1996).

As social physique anxiety is conceptualized along an affective dimension (Bane & McAuley, 1998), there is a link to emotion. Social physique anxiety also involves an evaluative component (Hart et al., 1989); thus, there is a clear link to the self-conscious emotions

specifically. An additional association is reflected through research regarding coping with social physique anxiety, which has suggested that one common coping strategy is behavioural and cognitive avoidance (Sabiston, Sedgwick, Crocker, Kowalski, & Mack, 2007). Avoidance is a common behaviour associated with the self-conscious emotion of shame (Tangney, 1990). Thus, exploring the relations between the self-conscious emotions and social physique anxiety may allow for both a better understanding of social physique anxiety as well as a deeper understanding of the implications of the self-conscious emotions to the experiences of young women athletes.

1.2.3.2 Obligatory exercise

Obligatory exercise is the tendency to exercise in ways that can be harmful to one's physical and psychological well-being (Steffen & Brehm, 1999). While the criteria for when exercise becomes excessive has not been determined, obligatory exercise can include excessive exercise frequency and intensity, preoccupied thoughts of exercise, and emotional responses to missing exercise such as guilt, specifically for young women during the adolescent period (Steffen & Brehm, 1999). Exaggerated attitudes and beliefs about exercise, the presentation of the body, and unattainable body ideals are characteristic of obligatory exercisers (Draeger, Yates, & Crowell, 2005). Obligatory exercise is important to understand, as it has the potential to become pathological, leading to eating-disordered traits (Ackard, Brehm, & Steffen, 2002). Thus, obligatory exercise is important to understand, given that athletes have been found to be at a high risk for eating disorders (Black, 1991), participate in more diets and be more body and weight-preoccupied than non-athletes (Davis, 2002), and display many of the same traits present in individuals with eating disorders, such as high self-expectations, and obsessive and rigid approach towards reaching goals, and perfectionism (Leichner, 1986).

Obligatory exercise appears to have some association to the self-conscious emotions. The emotional response component in obligatory exercise suggests an obvious link with the self-conscious emotions. The importance of emotion in linking exercise and eating disorders has been reflected by research with young women during the adolescent period, suggesting that the amount of excessive exercise may not be as important as the emotions related to the exercise activity (Steffen & Brehm, 1999). Additionally, the other two components of obligatory exercise, exercise frequency and intensity and preoccupied thoughts of exercise, may involve self-evaluation, and, consequently, self-conscious emotions. For example, individuals can evaluate their exercise frequency and intensity, leading to the experience of self-conscious emotions. Additionally, one can perceive that others are evaluating exercise frequency and intensity, providing another opportunity for self-conscious emotions to arise. Preoccupied thoughts of exercise can also be evaluative in nature; these real or imagined perceptions can give rise to self-conscious emotions. Therefore, proneness to shame and guilt, as well as the type of pride experienced surrounding the body, are important emotions to understand, as it is probable that the self-conscious emotions play a role in the distinction of when exercise is adaptive and when it becomes excessive or obligatory.

1.2.3.3 Objectified body consciousness

Objectified body consciousness is "the tendency to view oneself as an object to be looked at and evaluated by others" (Lindberg, Hyde, & McKinley, 2006, p. 65). There are three components of objectified body consciousness: body surveillance, body shame, and appearance control beliefs (Lindberg et al., 2006). Body surveillance reflects the extent to which an individual monitors his or her body and views it as an outsider (Lindberg et al., 2006). Body shame reflects an individual's shame when the body does not conform to cultural standards

(Lindberg et al., 2006). Finally, appearance control beliefs refer to the contention that people have control over their appearance (Lindberg et al., 2006). Pubertal development is strongly related to body surveillance (Lindberg et al., 2006), which suggests this construct may be especially relevant to adolescents. Self-objectification, a term used synonymously with body surveillance, was found to be higher when the body was on display and physical appearance was salient (specifically when tasks were performed wearing a swimsuit as opposed to a sweater; Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998). Since sport often creates situations where the body is on display, objectified body consciousness, particularly the component of body surveillance, seems particularity relevant for young women athletes. Participation in sport and/or physical activity in high school has been shown to be related to higher body shame in college aged males and females (Parsons & Betz, 2001). It seems possible that this body shame existed during the high school years as well, and thus might be a construct to explore with young women involved in sport. Additionally, self-objectification is related to greater body shame and more restrictive eating (Fredrickson et al., 1998). These associations, which lead to the theorization that higher objectified body consciousness might lead to negative body experiences for women (McKinley & Hyde, 1996), highlights the need to further understand and deal with objectified body consciousness.

In sum, objectified body consciousness is likely associated with the self-conscious emotions, given its evaluative component. Body surveillance is of particular interest, as it involves self-evaluation through body monitoring, providing an antecedent for the elicitation of self-conscious emotions. Body shame is a logical extension of the self-conscious emotion of shame that is appropriate for young women athletes, given the focus on the body in sport.

1.2.3.4 Fear of failure

Fear of failure is defined as "the capacity or propensity to experience shame upon failure" (Atkinson, 1957, p. 360). Individuals experiencing high levels of fear of failure acknowledge the possibility of failure and often feel pressure to accomplish unattainable feats (McGregor & Elliot, 2005). Failure is unacceptable in the eyes of these individuals, an ultimatum that carries negative implications in terms of self-worth (McGregor & Elliot, 2005). Not surprisingly, this may lead individuals with high fear of failure to avoid failure in achievement situations (McGregor & Elliot, 2005). General fear of failure has found to be associated with higher levels of sport anxiety and lower levels of self-determined motivation, self-esteem, and skill-related physical self-concept, and social competence in girls and young women involved in sport ranging from eight to 18 years of age (Conroy, Coatsworth, & Kaye, 2007). Clearly, fear of failure appears to be a salient issue for athletes, and may be better understood by further exploring the relations between fear of failure and the self-conscious emotions.

Fear of failure can be conceptualized within a self-evaluative framework (Heckhausen, 1991). This framework plays a role in how the individual defines, orients to, and experiences failure in achievement situations (Heckhausen, 1991). Fear of failure shares important conceptual links with shame, further strengthening the association with self-conscious emotions. Shame is believed to be the core emotion involved in fear of failure (McGregor & Elliot, 2005). Individuals high in fear of failure report greater shame upon a perceived failure than those low in fear of failure (McGregor & Elliot, 2005). This elicitation of shame following failure, as well as the evaluation of the self required to recognize failure, implies the influence of self-conscious emotions. The avoidance of failure in the achievement domain by those high in fear of failure is not unlike shame, which is associated with avoidance and withdrawal behaviours (Mascolo &

Fischer, 1995). Also, people high in fear of failure are more likely to generalize a specific failure experience to the global self than those low in fear of failure, which is similar to individuals experiencing shame (McGregor & Elliot, 2005).

1.2.3.5 Fear of negative evaluation

Fear of negative evaluation is "apprehension about others' evaluations, distress over their negative evaluation situations, and the expectation that others would evaluate oneself negatively" (Watson & Friend, 1969, p. 449). Fear of negative evaluation is particularly salient for adolescents, as research has shown young women report higher levels of fear of negative evaluation than young men (Garcia-Lopez, Olivares, Hidalgo, Beidel, & Turner, 2001; La Greca & Lopez, 1998; Leary, 1983a; Watson & Friend, 1969). In a physical education setting, higher fear of negative evaluation has been shown to be related to lower perceptions of athletic competence, with female primary and secondary students exhibiting lower perceived competence than males (Ridgers, Fazey, & Fairclough, 2007). As perceived competence is related to children's interest and continued participation in an activity (Weiss & Horn, 1990), those with a higher level of perceived competence are more likely to remain involved in the activity (Ebbeck, 1990; Klint & Weiss, 1987). Thus, fear of negative evaluation is an important construct to understand, given its association with athletic competence and participation and demonstrated relevance to girls and young women.

Given that reflection on how one is being perceived or evaluated by others is one antecedent for self-conscious emotions (Leary, 2004) and that shame in particular prompts a concern with others' evaluation of the self (Tangney & Dearing, 2002), fear of negative evaluation seems to have a particular link to evaluation. As a result, the self-conscious emotions should have an association with fear of negative evaluation.

1.2.4 The potential of self-compassion

Due to the potential for evaluation in the lives of young women athletes, it seems imperative that they develop ways to manage these evaluations. Managing evaluative processes may help one to deal with the self-conscious emotions effectively and reduce the negative experience of social physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation. Given the ample opportunity to participate in high school sport, high schools appear to provide an effective setting to target these issues when working with young women.

Many sport organizations in Canada (e.g., The Canadian Association for the Advancement of Women and Sport and Physical Activity, 2003) target the development of self-esteem through sport and physical activity. Since self-esteem has been found to impact youth's motivation to participate in sport (Weiss, 1993), research over the last two decades has focused on identifying sport environments and instructional strategies that foster positive self-esteem (Patterson, 1999; Weiss, 1993). Self-esteem promotion through physical education and sport programs have also garnered attention from an educational perspective (Fox, 1992). Schultz (1999) has suggested that the positive aspects of sport can help young women maintain their self-esteem during the adolescent years, particularly as they make the transition into high school. However, the relation between sport participation and general self-esteem is not clear (Bowker, Gadbois, & Cornock, 2003). Physical self-esteem or general satisfaction with body image may be enhanced during adolescence through sport involvement; however, not all adolescents experience increased self-esteem as a result of involvement in sport (Bowker et al., 2003). Additionally, Gibbons, Lynn, and Cornock (1997) have argued that the evidence that

participation in sports or even that winning at sports directly leads to increases in self-esteem is limited and conflicting.

Despite the emphasis on positive self-esteem promotion in the quest for positive sport experiences (e.g., The Canadian Association for the Advancement of Women and Sport and Physical Activity, 2003), self-esteem may not be as beneficial as expected. Neff (2003b) highlighted the limitations of self-esteem by arguing that while it is acknowledged that low self-esteem can be related to negative psychological outcomes, such as lack of motivation and depression (Harter, 1999), looking to increase self-esteem is not only difficult, but may not result in the expected or hoped for outcomes. For example, self-esteem has been shown to be highly resistant to change, and therefore might be difficult to increase (Swann, 1996). Attempts to foster a high sense of self-esteem could lead to narcissism, self-absorption, self-centeredness, and a lack of concern for others (Damon, 1995; Seligman, 1995). Additionally, "…encouraging adolescents to have positive self-esteem may simply reinforce their tendency toward self-evaluation" (Neff, 2003a, p. 95), potentially fuelling excessive experiences with self-conscious emotions.

Self-compassion provides an alternative to self-esteem. Self-compassion involves offering nonjudgmental understanding and compassion to oneself and can help to combat self-criticalness (Neff, 2003b). It consists of three components: self-kindness, common humanity, and mindfulness (Neff, 2003b). Self-kindness involves being kind and understanding towards oneself in instances of pain or failure, as opposed to being overly self-critical. Common humanity refers to perceiving that one is not alone in his/her experiences. Finally, mindfulness involves keeping painful thoughts and feelings in a "balanced awareness" (p. 85) rather than overidentifying with them.

It should be noted that self-esteem and self-compassion tend to be related to one another. For example, Neff (2003a) found that self-compassion, measured by the Self-Compassion Scale, was correlated with Rosenberg's (1965) and Berger's (1952) self-esteem measures (r = .59 and .62, respectively). This association was explained by Neff (2006) as self-compassionate individuals being more likely to feel good about themselves compared to those with lower levels of self-compassion. Nonetheless, this association provides support for the contention that some benefits previously attributed to self-esteem might be a function of self-compassion (Leary, Tate, Adams, Allen, & Hancock, 2007). However, self-compassion and self-esteem have been found to be conceptually and empirically distinct. When controlling for self-esteem, self-compassion remained a significant predictor of depression and anxiety with a sample of undergraduate students (Neff, 2003a). In a sample of women exercisers, aged 17 to 43, self-compassion contributed negative unique variance over and above self-esteem on social physique anxiety and obligatory exercise (Magnus & Kowalski, 2007). Therefore, it seems self-compassion has the potential to be important beyond self-esteem.

Self-compassion has been suggested as having the potential to be more adaptive than self-esteem in terms of developing a healthy attitude and relationship with oneself (Neff, 2003b). Self-esteem is contingent on self-evaluations, judgements, and comparisons to determine self-worth (Coopersmith, 1967; Harter, 1999) and also takes into account other's evaluations of the self (Cooley, 1902; Mead, 1934), whereas self-compassion is based on feelings of care and non-judgemental understanding (Neff, 2003b). Even though self-evaluation might still occur, self-compassion could allow people to maintain a positive view of themselves despite their shortcomings (Leary et al., 2007). Since self-esteem promotes evaluation, it could promote the experience of self-conscious emotions as well as self-evaluative thoughts and behaviours.

Experiences of self-conscious emotions are not inherently bad; however, it is important that individuals keep these emotions in balance and manage them effectively. Self-esteem may not have the same potential as self-compassion to balance the self-conscious emotions and buffer the negative thoughts and behaviours linked to self-evaluation. Recent research supports this contention, as self-compassion, but not self-esteem, has been found to buffer against anxiety in self-evaluative situations (Neff, Kirkpatrick, & Rude, 2006). Self-compassion deters individuals from overidentifing with their emotions (Neff, 2003b). This would ensure that the individual is not overwhelmed by feelings of shame, guilt, or pride, but instead allows individuals to keep their emotions in balance and be kind to themselves, realizing that their situation is part of the human experience (Neff, 2003b). Additionally, self-compassion is not based on ideal standards (Neff, 2003b), but rather has the potential to help people develop realistic perceptions of the body in terms of appearance and performance, promoting healthy lifestyle choices while avoiding getting carried away with the ideals.

Not only does self-compassion share a link to the self-conscious emotions through emotion and evaluation, but recent research suggests self-compassion is negatively associated to the self-conscious emotions of embarrassment, humiliation, guilt, and shame (Leary et al., 2007). While Leary et al.'s research is correlational, and therefore cannot imply causation, it is possible that self-compassion may provide some protection against self-conscious emotions. It is also possible that self-compassion works to moderate the effects of self-conscious emotions. For example, research has shown that the relation between negative emotion and reactions to negative events was moderated by self-compassion similarly across fault versus no-fault events (Leary et al., 2007).

In addition to its potential as a buffer in the relation between the self-conscious emotions and negative self-evaluative thoughts and behaviours, research has suggested that self-compassion has a number of positive attributes. Self-compassion has been related to psychological health, as it is negatively associated with negative affect, self-criticism, depression, anxiety, sadness, rumination, thought suppression, neuroticism, and neurotic perfectionism, and positively associated with life-satisfaction, social connectedness, emotional intelligence, happiness, optimism, positive affect, wisdom, personal initiative, curiosity and exploration, agreeableness, extroversion, and conscientiousness (Leary et al., 2007; Neff, 2003a; Neff, Rude, & Kirkpatrick, 2007). Additionally, because self-compassion is non-evaluative, self-centeredness, narcissism, and downward social comparison are not likely to develop along with self-compassion like they might with self-esteem (Neff, 2003b). Self-compassion is also associated with having fewer negative, pessimistic, and self-critical thoughts (Leary et al., 2007; Neff, 2003b; Neff et al., 2007). High levels of self-compassion are related to lower levels of fear of failure, possibly because failure situations are approached with kindness and understanding as opposed to harsh self-criticism and condemnation, allowing failure to be seen as a learning opportunity rather than an indicator of self-worth (Neff, Hseih, & Dejitterat, 2005). This relation should be reflected with all self-evaluative thoughts and behaviours, as they share an evaluative component that could be more effectively managed with understanding and patience as opposed to rumination. Taken together, this research suggests that self-compassion may provide some protection against negative affect, particularly when evaluation is involved. Given that evaluation is a salient component to experiences of social physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation, it seems to be

worthwhile to investigate the relations between self-compassion and these constructs, as self-compassion has the potential to protect against these negative experiences.

The positive aspects of self-compassion suggest that promotion of self-compassion may be a valuable endeavour, particularly among young women athletes. This is a challenge, however, because adolescence may be a period of time when self-compassion is at its lowest point (Neff, 2003b). The engagement in constant evaluations and comparisons in an attempt to negotiate identity and social status (Brown & Lohr, 1987; Harter, 1990), and the pressure adolescents often face from a variety of sources, such as academics, fitting in with the popular crowd, body image issues, and dating, often lead to unfavourable appraisals and it may be difficult to exercise self-compassion (Neff, 2003b). Additionally, adolescents are often caught up in self-absorption, leading to increased self-criticism, feelings of isolation, and over-identification with emotions, highlighting a period of life where self-compassion may be extremely useful, but lacking (Neff, 2003b). In order to provide young women with positive sport experiences, further understanding the role of self-compassion in dealing with self-evaluative thoughts and behaviours is imperative, as it provides a potential direction for future intervention.

1.3 STATEMENT OF PURPOSE AND HYPOTHESES

The purpose of the proposed study was to explore the relation between self-conscious emotions (guilt, shame, authentic pride, and hubristic pride) and self-evaluative thoughts and behaviours (i.e., social physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation) for young women involved in high school sport[5].

[5] The participants in this study will also be referred to as adolescents. The definition of adolescence varies with context and is difficult to precisely define due to the variation in onset and termination. However, there are three recognized stages of adolescence: early (ages 11-13), middle (ages 14-16) and late (ages 17-20; Dixon & Stein, 2000), although the age ranges vary in the literature.

Additionally, the relations between self-compassion and the self-conscious emotions, as well as the relations between self-compassion and the self-evaluative thoughts and behaviours, were explored. Another major aim of the study was to explore the potential of self-compassion to explain unique variance beyond self-esteem on the self-evaluative thoughts and behaviours. Finally, the moderating effects of self-compassion on the relation between self-evaluative thoughts and behaviours and the self-conscious emotions of shame and guilt were also explored.

1.3.1 Hypotheses

1. Due to the potentially damaging nature of shame, shame was expected to be positively related to the self-evaluative thoughts and behaviours, in particular those typically associated with negative well-being. More specifically, shame should be *positively* related to:
    a. Social physique anxiety
    b. Obligatory exercise
    c. Objectified body consciousness
    d. Fear of failure
    e. Fear of negative evaluation
2. Alternatively, given the potential adaptive nature of guilt, the correlations were expected to be in the opposite direction of shame. More specifically, guilt should be *negatively* related to:
    a. Social physique anxiety
    b. Obligatory exercise
    c. Objectified body consciousness
    d. Fear of failure
    e. Fear of negative evaluation

3. Because there has been little research regarding authentic and hubristic pride, it was unclear how pride would be related to self-compassion and the self-evaluative thoughts and behaviours. However, because of the important distinctions between authentic and hubristic pride, and the potential parallel with the conceptualization of guilt and shame, pride was explored in a similar way as with guilt and shame. Authentic pride and guilt have been suggested to be more adaptive than hubristic pride and shame (Tracy & Robins, 2007); therefore:
    a. Authentic pride might have similar relations as guilt. More specifically, it may display *negative* relations with the self-evaluative thoughts and behaviours:
        (1) Social physique anxiety
        (2) Obligatory exercise
        (3) Objectified body consciousness
        (4) Fear of failure
        (5) Fear of negative evaluation
    b. Hubristic pride might be more similar to shame. More specifically, it may display *positive* relations with the self-evaluative thoughts and behaviours:
        (1) Social physique anxiety
        (2) Obligatory exercise
        (3) Objectified body consciousness
        (4) Fear of failure
        (5) Fear of negative evaluation
4. Due the theorized role of self-compassion as a potential buffer against self-evaluation:
    a. Self-compassion was hypothesized to be inversely related to shame.

b. Self-compassion was hypothesized to be inversely related to guilt.

c. The relation between self-compassion and authentic pride will be exploratory.

d. The relation between self-compassion and hubristic pride will be exploratory.

5. Again, due to the theorized role of self-compassion as a potential buffer against self-evaluation, self-compassion was hypothesized to be inversely related to the self-evaluative thoughts and behaviours:

   a. Social physique anxiety

   b. Obligatory exercise

   c. Objectified body consciousness

   d. Fear of failure

   e. Fear of negative evaluation

6. Self-compassion was expected to explain significant unique variance beyond self-esteem on the self-evaluative thoughts and behaviours:

   a. Social physique anxiety

   b. Obligatory exercise

   c. Objectified body consciousness

   d. Fear of failure

   e. Fear of negative evaluation

7. Self-compassion was hypothesized to show a significant moderating effect on the relations between:

   a. *Shame* and:

      i. Social physique anxiety

      ii. Obligatory exercise

iii. Objectified body consciousness

iv. Fear of failure

v. Fear of negative evaluation

b. *Guilt* and:

i. Social physique anxiety

ii. Obligatory exercise

iii. Objectified body consciousness

iv. Fear of failure

v. Fear of negative evaluation

The rationale for hypothesis 7 was that the components of self-compassion will not only reduce highly self-critical evaluations that often promote self-evaluative thoughts and behaviours, but also that self-compassion ensures that individuals keep their emotions in balanced awareness and do not over-identify with emotions, such as guilt and shame, which might lead to self-evaluative thoughts and behaviours (Neff, 2003a).

CHAPTER 2

2.1 METHOD

2.1.1 Participants

Participants were 151 young women athletes in grades nine through twelve who had been involved in at least one high school sport in the last 12 months. The participants were recruited from high school sport teams during the fall and winter sport seasons (September to March). Age, height, and weight information is summarized in Table 2.1. Means for height and weight fall within an expected range based on stature-for-age and weight-for-age percentiles (National Center for Health Statistics, 2000). Maturity, location, and sociocultural information is presented in Table 2.2. Parental education level data is presented in Table 2.3.

Sport demographics (M = 2.61, SD = 0.66, range = 0 to 3) revealed the majority of participants (69.5%, n = 105) reported being active in sport over five times during the past week when the questionnaire was administered. Only three participants reported being inactive during the past week (2.0%)[6]. Participants reported involvement in a variety of high school sports, including volleyball, basketball, cheerleading, soccer, cross-country, badminton, track and field, curling, and wrestling (see Table 2.4 for frequency and level of participation). They were also involved in an array of sports at the club level, the most commonly reported being volleyball,

[6] These three participants verbally disclosed that they were unable to be active in sport due to injury, but remained on the team.

Table 2.1

Participant age, height, and weight information.

	n	Reported Range	*M*	*SD*
Age	151	13-18 years	15.13 years	1.21 years
Height	149	149.86-185.42 cm	167.27 cm	6.37 cm
Age 13	4	157.48-172.72 cm	165.74 cm	6.35 cm
Age 14	56	152.40-185.42 cm	168.80 cm	6.73 cm
Age 15	36	149.86-180.34 cm	165.70 cm	6.38 cm
Age 16	23	144.32-175.26 cm	165.49 cm	7.23 cm
Age 17	29	147.32-177.80 cm	165.67 cm	7.49 cm
Age 18	1	170.18-170.18 cm	170.18 cm	n/a
Weight	146	42.41-82.59 kg	58.50 kg	7.50 kg
Age 13	4	46.88-66.96 kg	58.04 kg	8.74 kg
Age 14	56	42.41-78.13 kg	55.85 kg	7.12 kg
Age 15	36	44.20-82.59 kg	60.27 kg	8.27 kg
Age 16	23	45.98-71.43 kg	59.23 kg	6.57 kg
Age 17	29	42.41-73.66 kg	60.70 kg	6.50 kg
Age 18	1	69.20-69.20kg	69.20 kg	n/a

Note. Height and weight data was self-reported.

Table 2.2

Participant maturity, location, and sociocultural information.

	n	%
Maturity information		
Premenarcheal	8	5.3
Postmenarcheal	134	88.7
Did not report	9	6.0
Location		
Rural	56	37.1
Urban	98	64.9
Sociocultural information		
Aboriginal	7	4.7
Caucasian	145	95.9
Chinese	1	0.7
Filipino	1	0.7
Japanese	1	0.7
Latin American	2	1.3
South Asian	1	0.7
West Asian	1	0.7
Did not report	3	2.0

Note. Participants could identify as belonging to more than one sociocultural category.

Table 2.3

Participant parental education level information

Highest education level attained	Father		Mother	
	n	%	*n*	%
Did not finish high school	15	9.9	3	2.0
Completed high school	23	15.2	21	13.9
Some education after high school	31	20.5	25	16.6
Graduated from college or university	66	43.7	93	61.6
Unknown	16	10.7	9	5.9
Unreported	0	0	0	0

Table 2.4

Frequencies of participant high school sport involvement by level

Sport	Recreational	Local	Provincial	Regional
Badminton	13	30	9	0
Basketball	45	79	59	20
Cheerleading	2	2	2	1
Cross-country	6	8	4	0
Curling	0	3	2	1
Floor hockey	14	0	0	0
Golf	0	0	2	0
Soccer	16	22	17	6
Track and field	6	26	15	0
Volleyball	59	97	43	13
Wrestling	1	1	1	1

Note. All sports are listed in alphabetical order. *Recreational* refers to competing in intramurals or in a recreational league. *Local* refers to competing against athletes from around the city/town. *Provincial* refers to competing against athletes from around the province. *Regional* refers to competing against athletes from nearby provinces. Note that the majority of participants participated in a number of sports at a variety of levels, and therefore totals in each column will not equal the number of participants (N = 151).

basketball, and soccer (see Table 2.5 for a complete listing of sports, levels, and frequency information).

2.1.2 Measures

2.1.2.1 Self-conscious emotions

The Test of Self-Conscious Affect for Adolescents (TOSCA-A; Tangney, Wagner, Gavlas, & Gramzow, 1991; see Appendix A) was used to assess the self-conscious emotions of shame (shame-proneness), guilt (guilt-proneness), alpha (authentic) pride, and beta (hubristic) pride. The TOSCA-A is comprised of 10 negative and five positive scenarios drawn from both the TOSCA for adults and the TOSCA-C for children, with some items being slightly reworded based on pilot work with several hundred adolescents to make them more relevant for this population (Tangney & Dearing, 2002). The measure consists of scenarios that include a set of four to five responses, each reflecting a different affective tendency (i.e., guilt-proneness (15-items), shame-proneness (15-items), externalization (15-items), alpha pride (5-items), beta pride (5-items), and detachment (10-items)). The externalization and detachment items were removed, as these constructs were not a focus in the current study. All 40 remaining responses were rated on a 5-point scale from 1 (not at all likely) to 5 (very likely). For example, one item is *"For several days you put off talking to a teacher about a missed assignment. At the last minute you talk to the teacher about it, and all goes well."*. The response set is: (a) "*I would think: 'I guess I'm more convincing than I thought.*'" (alpha/authentic pride), (b) *"I would regret that I put it off."* (guilt), (c) "*I would feel like a coward*." (shame), (d) *"I would think: 'I handled that well.'"* (beta/hubristic pride). Advantages of a scenario-based measure include that the structure of the measure is more conceptually consistent with current notions of guilt and does not rely on using the terms "shame" and "guilt" to avoid the potential for misunderstood definitions

Table 2.5

Frequencies of participant club sport involvement by level

Sport	Recreational	Local	Provincial	Regional	National	International I	International II
Basketball	11	21	15	0	1	1	0
Biathlon	1	1	1	1	1	0	0
Curling	2	4	3	1	0	0	0
Cycling	0	1	1	1	0	0	0
Dance	5	10	13	10	3	3	0
Diving	1	1	0	0	0	0	0
Fastball	4	11	17	13	0	0	0
Fencing	1	0	0	0	0	0	0
Field hockey	1	2	0	0	0	0	0
Figure skating	2	6	3	1	0	0	0
Hockey	3	1	16	6	2	3	0
Horseback riding	0	0	0	1	0	0	0
Lacrosse	0	1	0	0	0	0	0
Ringette	1	2	2	1	1	1	0
Rubgy	0	2	2	1	0	0	0
Skiing	1	1	1	0	0	0	0
Softball	2	7	8	1	1	0	0
Soccer	22	32	26	20	6	4	1
Speedskating	0	1	2	2	1	1	0
Swimming	7	0	1	0	0	0	0
Synchronized swimming	1	0	0	0	0	0	0
Track and field	3	6	2	2	0	0	0
Touch football	1	0	0	0	0	0	0
Ultimate frisbee	1	0	0	0	0	0	0
Volleyball	21	39	40	32	20	2	1
Waterpolo	1	0	0	0	0	0	0
Wrestling	0	1	1	0	0	0	0

Note. All sports are listed in alphabetical order. *Recreational* refers to competing in intramurals or in a recreational league. *Local* refers to competing against athletes from around the city/town. *Provincial* refers to competing against athletes from around the province. *Regional* refers to competing against athletes from nearby provinces. *National* refers to competing at a National Championship. *International I* refers to competing against athletes from another country. *International II* refers to being a member of a national team (i.e., representing/represented Canada). Note that the majority of participants participated in a number of sports at a variety of levels, and therefore totals in each column will not equal the number of participants (N = 151).

(Tangney & Dearing, 2002). Additionally, this type of measure is less likely to arouse defensiveness (Tangney & Dearing, 2002). Psychometric support has also been demonstrated. Acceptable Cronbach's alpha values have been reported for the shame (α = .77 to .84) and guilt subscales (α = .81 to .84; Tangney & Dearing, 2002; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). There is questionable support for the internal consistency of the alpha pride and beta pride subscales (α = .44 to .51 and α = .43 to .53, respectively; Tangney & Dearing, 2002). Validity support for the TOSCA-A has been evidenced by the measure's relation to indexes of anger, empathy, and psychological symptoms (Tangney et al., 1996).

Due to the marginal reliability support for the pride subscales in the TOSCA-A, the Authentic and Hubristic Pride Scales (Tracy & Robins, 2007; see Appendix B) were also used. These scales were empirically derived from a series of studies assessing participants' subjective feelings during a pride experience and their chronic dispositional tendencies to experience both hubristic and authentic pride. Both trait and state versions are available. The present study employed the trait version, as the purpose was not to look at general experiences of self-conscious emotions. The measure provides a number of words and phrases that describe different feelings and emotions. The participant was instructed to indicate the extent to which they generally feel this way. The response format uses a five-point scale with 1 being "not at all" and 5 being "extremely". Both scales have demonstrated acceptable alpha levels with an undergraduate student sample: Authentic pride scale (7 items, including "*accomplished*, "*like I am achieving*," "*confident*," "*fulfilled*," "*productive*," "*like I have self-worth*," and "*successful*;" α = .88) and Hubristic pride scale (7 items, including "*arrogant*," "*conceited*," "*egotistical*," "*pompous*," "*smug*," "*snobbish*," and "*stuck-up*;" α = .90; Tracy & Robins, 2007). The validity of both the trait and state scales is supported by demonstrated correlations with variables that are

theoretically and empirically linked to pride. The trait Authentic Pride Scale was positively correlated with self-esteem (r = .50), agreeableness (r = .19), conscientiousness (r = .38), and emotional stability (r = .28; Tracy & Robins, 2007). The trait Hubristic Pride Scale was positively correlated with self-aggrandizing narcissism (r = .22) and shame-proneness (r = .09), and negatively associated with agreeableness (r = -.26) and contentiousness (r = -.25; Tracy & Robins, 2007).

2.1.2.2 Self-compassion

Self-compassion was measured using the 26-item Self-Compassion Scale (SCS; Neff, 2003a; see Appendix C). The SCS assesses six different aspects of self-compassion: Self-Kindness (5-items, e.g., *"I try to be understanding and patient toward aspects of my personality I don't like."*), Self-Judgment (5-items, e.g., *"I'm disapproving and judgmental about my own flaws and inadequacies."*), Common Humanity (4-items, e.g., *"I try to see my failings as part of the human condition."*), Isolation (4-items, e.g., *"When I think about my inadequacies it tends to make me feel more separate and cut off from the rest of the world."*), Mindfulness (4-items, e.g., *"When something painful happens I try to take a balanced view of the situation."*), and Over-Identification (4-items, e.g., *"When I'm feeling down I tend to obsess and fixate on everything that's wrong."*). Responses are given on a 5-point scale from 1 (almost never) to 5 (almost always; Neff, 2003a). Mean scores on the subscales are summed after negative items are reverse coded, resulting in an overall self-compassion score (Neff, 2003a). Scales can be used independently or summed to form a composite self-compassion score.

Past research has suggested that the SCS is psychometrically sound. Internal consistency reliability has been found to be α = .78 for the 5-item Self-Kindness subscale, α = .77 for the 5-item Self-Judgement subscale, α = .80 for the four-item Common Humanity subscale, α = .79

for the four-item isolation subscale, α = .75 for the four-item Mindfulness subscale, and α = .81 for the four-item Overidentification subscale in an undergraduate student sample (Neff, 2003a). For the composite SCS, internal consistency reliability has been reported to be α = .73 to .94 (Leary et al., 2007; Neff, 2003a; Neff, et al., 2005) in university student samples. Three week test-retest reliability has also been shown to be acceptable for each subscale: Kindness subscale (r = .88), Self-Judgement subscale (r = .88), Common Humanity subscale (r = .80), Isolation subscale (r = .85), Mindfulness subscale (r = .85), and Over-Identification subscale (r = .88; Neff, 2003a).

Content validity is supported by establishing that individuals with the highest level of self-compassion tended to be equally kind to oneself and to others, whereas those with lower levels of self-compassion tended to report exhibiting more kindness towards others than towards oneself (Neff, 2003a). The SCS was found to have a significant positive correlation with the Social Connectedness scale (r = .41, p <.01) and with all three subscales of the Trait-Meta Mood Scale (Attention, r = .11, p <.05; Clarity, r = .43, p <.01; and Repair, r = .55, p <.01), providing support for convergent validity of the SCS (Neff, 2003b). Evidence of construct validity has been found to be acceptable. The SCS has been found to be negatively correlated with self-criticism (r = -.65, p <.01; Neff, 2003a).

Discriminant validity evidence for the SCS is provided by the negative associations with narcissism (r = -.08, p =.28) and the Self-Criticism subscale of the Depressive Experiences Questionnaire (r = -.65, p <.01; Neff, 2003a). The SCS can also be distinguished from measures of self-esteem, such as the Rosenberg Self-Esteem Scale (Neff, 2003a). The SCS does not appear to be influenced by the social desirability bias, providing more support for the discriminant validity of the scale. Neff (2003a) has reported a non-significant correlation has

been found between the SCS and the Marlowe-Crowne Social Desirability bias scale (r = .05, p = .92) in an undergraduate student sample.

2.1.2.3 Self-esteem

Global self-esteem was measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1965, see Appendix D), which uses 10-items to assess general self-esteem and feelings about oneself (e.g., *"I take a positive attitude toward myself."*). Participants respond on a scale from 0 (strongly disagree) to 3 (strongly agree). Higher scores indicate higher self-esteem. Internal reliability has ranged from .76 to .88 in adolescent samples (Choi, Meininger, & Roberts, 2006; Rosenberg, 1965). Construct validity has also been supported in adolescent samples (Choi et al., 2006).

2.1.2.4 Social physique anxiety

The Social Physique Anxiety Scale (SPAS; Hart, Leary, & Rejeski, 1989) measures the degree of anxiety one experiences when one perceives that their physique is being evaluated or observed (Hart et al., 1989). Respondents are asked to indicate the degree to which statements are true for them (e.g., "*I am comfortable with the appearance of my physique/figure.*"). Responses range on a 5-point Likert scale from 1 (not at all) to 5 (extremely). Adequate test-retest reliability (r = .82) has been found with adult women populations over an eight-week period for the SPAS (Hart et al., 1989). Test-retest values with adolescent participants has been shown to be .92 (Bais, Asci, Karabudak, & Kiziltan, 2004). The SPAS has also demonstrated evidence of internal consistency, ranging from α = .87 to α = .93 (Bais, Asci, Karabudak, & Kiziltan, 2004; Bartlewski, Van Raalte, & Brewer, 1996; Crawford & Eklund, 1994; Eklund & Crawford, 1994; Martin, Rejeski, Leary, McAuley, & Bane, 1997; Petrie, Diehl, Rogers, & Johnson, 1996) with a variety of women. Construct validity has been demonstrated with women

undergraduate students, with fear of negative evaluation (r = .47), interaction anxiousness (r = .40), and public self-consciousness (r = .30) all being related to the SPAS (Hart et al., 1989). Individuals with high social physique anxiety reported they thought frequently of their bodies, were less comfortable, and more stressed than those with low social physique anxiety, supporting construct validity (Hart et al., 1989).

This study employed the 9-item SPAS scale (see Appendix E), based upon recommendations by Martin and colleagues (1997). Items 1, 2, and 5 have been eliminated from the original SPAS to strengthen the unidimensionality of the scale. Martin et al. (1997) found that the 9-item scale maintained similar reliability and validity scores to the 12-item scale. The 9-item SPAS has been used with adolescent and young adult elite athletes, with an acceptable reliability coefficient (α = .87; Haase et al., 2002). Validity support with this population is supported as the SPAS is correlated with negative perfectionism (r = .41) and eating attitudes related to disordered eating (r = .43).

2.1.2.5 Obligatory exercise

The Obligatory Exercise Questionnaire (OEQ; Pasman & Thompson, 1988; see Appendix F) is a 20-item scale and was used to measure attitudes and activities related to personal exercise (e.g., "*When I miss a scheduled exercise session I may feel tense, irritable, or depressed.*"). Respondents are asked to choose how often the statements reflect their exercise behaviour. Responses are indicated on a 4-point Likert-type scale ranging from 1 (never) to 4 (always). Higher scores on the OEQ indicate a stronger sense of obligation to exercise. Satisfactory internal consistency reliability has been established with high school women for the OEQ for each of the three subscales: emotional element of exercise (α = .69), exercise frequency and intensity (α = .75), and exercise preoccupation (α = .76; Steffen & Brehm, 1999). Construct

validity was achieved by correlating the OEQ with two related behaviours, anxiety if unable to exercise (r = .87) and probability of exercising despite a painful injury (r = .72), with a university undergraduate sample (Pasman & Thompson, 1988). One minor modification to the scale instructions was made to make the scale more appropriate for athletes. To ensure clarity, they were instructed that exercise includes their physical sport training, as the interest was on both excessive exercise and training behaviour in this study.

2.1.2.6 Objectified body consciousness

Objectified body consciousness involves the internalization of cultural standards so that one believes that they originate from the self and the belief that these standards are attainable, even at times when that goal is unlikely (McKinley & Hyde, 1996). This experience of the body as an object and accompanying attitudes are known as objectified body consciousness (McKinley & Hyde, 1996) and was assessed using the Objectified Body Consciousness Scale for Youth (OBC-Youth; Lindberg et al., 2006; see Appendix G). The OBC-Youth consists of three subscales that measure the three components of objectified body consciousness: body surveillance (4-items; e.g, *"During the day, I think about how I look many times."*), body shame (5-items; e.g, *"When I'm not the size I think I should be, I feel ashamed."*), and appearance control beliefs (5-items, e.g., *"I think I could look as good as I wanted to if I worked at it."*). Participants indicate their agreement with the 14-items on a seven-point scale from 1 (strongly disagree) to 7 (strongly agree) or indicate that the item is not applicable to them. Higher scores indicate a higher degree of objectified body consciousness. Internal consistency has been supported for the body surveillance and body shame subscales, with α values of .88 and .79 respectively. However, the appearance control beliefs subscale had internal consistency values of α = .44 and .56, leading to a recommendation that this subscale may not be suitable for

preadolescent and young adolescent participants[7] (Lindberg et al., 2006). Despite this, the authors do note that the subscale's applicability will likely increase with age and its utility with older adolescents still needs to be determined (Lindberg et al., 2006). The issue is furthered lessened by keeping in mind that body shame and body surveillance are of primary interest in the present study, with appearance control beliefs playing a secondary role. Two week test-retest reliability for all subscales is acceptable, with reported values of r = .81, r = .62, and r = .70 for body surveillance, body shame, and appearance control beliefs, respectively (Lindberg et al., 2006). Construct validity has also been reported by looking at relations with body esteem, public self-consciousness, and attitudes towards appearance (Lindberg et al., 2006). Additionally, the OBC-Youth shows psychometric properties similar to the classic version of objectified body consciousness (Lindberg et al., 2006).

2.1.2.7 Fear of failure

The five-item short form of the Performance Failure Appraisal Inventory (PFAI-S; Conroy, Willow, & Metzler, 2002, see Appendix H) measured fear of failure. Items assess fear of experiencing shame and embarrassment (i.e., *"When I am failing, I worry about what others think about me."*); fear of devaluing one's self-estimate (i.e., *"When I am failing, I am afraid that I might not have enough talent."*); fear of having an uncertain future (i.e., *"When I am failing, it upsets my "plan" for the future."*); fear of important others losing interest (i.e., *"When I am not succeeding, people are less interested in me."*); and fear of upsetting important others (i.e., *"When I am failing, important others are disappointed."*). Participants rate how often they believe each statement is true for them on a Likert scale from –2 (do not believe at all) to +2 (believe 100% of the time). Items are summed and divided by the number of items to obtain a

[7] The appearance control beliefs subscale was incorporated in the questionnaire package but was not included in analyses in the present study due to low internal consistency values. The composite OBC-Youth was calculated without this subscale.

fear of failure score. Research has supported and recommended using this measure with adolescents (Conroy et al., 2007). An internal consistency value of α = .79 has been found in a sample of women athletes in their adolescence, with external validity evidence provided by a nomological network of relations between fear of failure and motivation and anxiety, self-perceptions, and social competence (Conroy et al., 2007). Additionally, there has been support for both structural stability and differential stability of the PFAI-S (Conroy, Metzler, & Hofer, 2003).

2.1.2.8 Fear of negative evaluation

The brief version of Watson and Friend's (1969) Fear of Negative Evaluation Scale (Leary, 1983a, see Appendix I) was used to measure the degree to which an individual experiences apprehension at the prospect of being negatively evaluated. A high score indicates a greater fear of negative evaluation and normally results in people behaving in ways that avoid the chance of being negatively evaluated. The brief FNE scale is a 12-item measure (e.g., *"I worry about what other people will think of me even when I know it doesn't make any difference."*). Participants rate the degree to which each item applies to them on a five-point Likert scale (1 = not at all characteristic of me; 5 = extremely characteristic of me). Total scores range from 12 to 60. The brief FNE scale correlates highly with the original version (r = .96) and shares similar psychometric properties (Leary, 1983a). Cronbach's α was found to range from .90 to .97 and test-retest reliability has been reported at r = .75 and .94 at four-weeks and two-weeks, respectively (Collins, Wetra, Dozois, & Stewart, 2005; Leary, 1983a). Acceptable internal consistency values have also been found in an adolescent population (α = .89; Kowalski, Mack, Crocker, Neifer, & Fleming, 2006). The validity of the measure is supported through significant correlations with the Interaction Anxiousness Scale (Leary, 1983b). Evidence for

criterion-predictive validity has been provided through a negative correlation on the brief FNE and the degree to which an individual thought they made a good impression on others (Leary, 1983b). Additionally, a positive correlation between the brief FNE and the degree to which participants were bothered by an unfavourable evaluation from others was also displayed. The measure correlates significantly with social avoidance, but not with agoraphobic avoidance and other non-theoretically linking variables such as age and education, providing discriminant validity evidence (Collins et al., 2005). Factor analysis provides support for the construct validity of the measure (Collins et al., 2005). It has been recommended by Carleton, McCreary, Norton, and Asmundson (2006) that reverse worded items on the brief FNE be replaced by straightforwardly worded items, as this results in a higher internal consistency (α = .95) when compared to the original version (α = .89). The present study followed this recommendation.

2.1.2.9 Demographics

General demographic information (see Appendix J) including age, weight, height, sociocultural information, and parental education level, was collected. The parental educational measure was based on work with adolescents by Sabo, Miller, Melnick, Farrell, and Barnes (2005). Participants identified each parent's highest level of education from the following items: (1) *did not finish high school*, (2) *graduated from high school*, (3) *some education after high school*, and (4) *graduated from college*. A fifth option, (5) *I'm not sure*, was also added. Additional information specifying current sport participation was also included in the questionnaire package to provide descriptive information on the participants (see Appendix K). Specific information regarding the different types of sports each athlete was involved with, as well as the level of competition was also collected. A frequency item was also included as a measure of sport participation (Daniels & Leaper, 2006). Participants were asked *"During the*

past week, how many times did you play an active sport, such as baseball, softball, basketball, soccer, swimming, or football?". Responses ranged from 0 (not at all) to 3 (five or more times).

2.1.3 Design and Procedure

After obtaining ethical approval (see Appendix L), a pilot study was conducted with three adolescent women athletes (aged 14, 15, and 16) to ensure the clarity, length, and readability of the questionnaire package. Based on the feedback from the pilot study, minor adjustments to the questionnaire package were made in terms of researcher explanation of the study and questionnaire instructions (e.g., each item in each scenario of the TOSCA-A needed to be completed). Also, it was made more clear that on the sport participation section each sport should be recorded as each level participated in, which might mean recording a sport more than once. The approximate time commitment for the questionnaire package was between 20 to 30 minutes.

Following permission from the school boards (see Appendix M), school, and coach, participants were recruited from high school sports teams. Whenever possible, one contact person from each school was identified to help facilitate the study at that particular school (e.g., recruiting other teams, putting me in contact with other coaches at the school, collecting consent and assent forms, and setting up meeting times for: (a) a study explain and distribution of consent and assent forms, (b) completion of the questionnaire package, and (c) participation in the mental skills training session). I worked closely with this contact person prior to entering the school to ensure my visits were as efficient, convenient, and nondisruptive as possible for the school, coaches, and athletes. The frosh, junior, and senior teams at both urban (n = 4) and rural (n = 4) schools were invited to participate in order to increase participant numbers and the generalizability of results. All of the school boards contacted granted permission for this

research study. Ten out of eleven schools contacted allowed for the study to take place within their school; however, as the ultimate decision regarding participation was that of the teams and the coaches, only eight schools had teams who participated. However, twelve coaches were involved in recruiting athletes and teams in their school.

At a time convenient to the school and the coach, I visited the coach (and in most cases the entire team as well) to explain the purpose and procedure of the study. A pre-site visit was not possible with some teams due to the team's busy schedule. After obtaining parental consent (see Appendix N for Parental Consent Form) and participant assent (see Appendix O for Participant Assent Form), I set up a time to distribute the questionnaire packages that was convenient for the team and the coach. The measures in the questionnaire were presented in the following order: current sport participation demographics questionnaire, TOSCA-A, Authentic and Hubristic Pride Scales, SCS, OEQ, RSES, OBC-Youth, PFAI-S, FNE, and general demographics questionnaire. Following completion of the questionnaire packages, as a thank-you for participating, the team had the opportunity to participate in a session on mental skills training. I conducted each of these sessions, which covered mental skills such as goal setting, positive self-talk, imagery, and focus planning. As it was my goal to make the session as relevant and useful as possible for the athletes, the coach was offered input as to the direction of the presentation. The sessions were interactive, as I worked through skills with the athletes and focused attention on issues that they identified to be relevant.

Participation in both the questionnaire and mental skills training was voluntary and it was made clear that the athlete could withdraw at any time without penalty and participation in the study would have no effect on the athlete's participation or role with the team or rapport with the coach. If an athlete in attendance did not want to participate (although this was not an issue in

the present study), she was given the option of using the time for homework or some other task to use the time effectively. Athletes who completed the questionnaire before the rest of their team were also encouraged to do homework or keep busy with some other task, as to not distract or draw attention to the other athletes who were still working on the questionnaire. Students remained anonymous on the questionnaire package and personal responses were kept confidential, as results were reported in aggregate form. All questionnaires were coded using an identification number. Although not expected or reported, if the participant experienced distress in completing the questionnaire package, she would have been referred to a mental health consultant and/or a school counsellor to address any psychological issues that may have resulted from completing a questionnaire with a focus on the body and evaluation.

The questionnaire package was delivered in a classroom or gymnasium setting using a pencil and paper format. Prior to beginning the questionnaire, I explained the study and gave instructions for completion of the questionnaire package. I was also present to answer any questions the participants had while completing the questionnaire.

2.1.4 Data Analysis

Pearson correlation was used to examine the relation between the self-conscious emotions (i.e., guilt, shame, authentic pride, and hubristic pride) and the self-evaluative thoughts and behaviours (i.e., social physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation [Hypotheses 1.a.-1.e., 2.a.-2.e., and 3.a.-3.b.]). The relation between self-compassion with the self-conscious emotions (Hypotheses 4.a.-4.d.) and the self-evaluative thoughts and behaviours was also examined with Pearson correlations (Hypotheses 5.a.-5.e.).

Hierarchical regression was used to test the hypothesis that self-compassion explains variance beyond self-esteem on the self-evaluative thoughts and behaviours (Hypotheses 6.a.-6.e.). Separate hierarchical regression were run by entering self-esteem on Step 1 and self-compassion on Step 2, with each of the self-evaluative thoughts and behaviours as dependent variables. Hierarchical regression was also used to explore the moderating effects of self-compassion on the relations between the self-conscious emotions and the self-evaluative thoughts and behaviours (Hypothesis 7.a.i.-7.b.v.). Separate hierarchical regression were used by entering self-conscious emotions on Step 1, self-compassion on Step 2, and the interaction term on Step 3 with each of the self-evaluative thoughts and behaviours as dependent variables. Significant interactions were plotted, post hoc probing was conducted to test whether or not the slopes of the lines differed from zero for all significant interactions (Aiken & West, 1991).

Prior to running the regression analyses, the variables were examined to test the assumptions of normality, linearity, multicollinearity, and homoscedasticity of multiple regression. Normality was assessed by examining the distribution of the variables and histograms of the standardized residuals (Tabachnick & Fidell, 2001; Stevens, 1992). Linearity and homoscedasticity were examined through the scatterplots of the residuals. Internal consistency of the measures was examined using Cronbach's alpha.

CHAPTER 3

3.1 RESULTS

The purpose of this study was to explore the relation between self-conscious emotions (i.e., guilt, shame, authentic pride, and hubristic pride) and self-evaluative thoughts and behaviours (i.e., social physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation). Additionally, the potential of self-compassion to explain variance beyond self-esteem and the moderating effects of self-compassion on these relations were also explored.

3.1.1 Scale Reliabilities and Descriptive Statistics

Descriptive statistics and internal consistency scale reliabilities for the Test of Self-Conscious Affect for Adolescents (TOSCA-A), the Authentic and Hubristic Pride Scales, the Self-Compassion Scale (SCS), and the Rosenberg Self-Esteem Scale (RSES) are shown in Table 3.1. Descriptive statistics and internal consistency scale reliabilities for the self-evaluative thoughts and behaviours, which in this study consisted of Social Physique Anxiety Scale (SPAS), the Obligatory Exercise Questionnaire (OEQ), the Objectified Body Consciousness Scale for Youth (OBC-Youth), the short form of the Performance Failure Appraisal Inventory (PFAI-S), and the brief Fear of Negative Evaluation Scale (FNE), are also shown in Table 3.1.

Table 3.1

Descriptive statistics and scale reliabilities for the self-conscious emotions (TOSCA-A and Authentic and Hubristic Pride Scale), self-compassion (SCS), self-esteem (RSES), and the self-evaluative thoughts and behaviours (SPAS, OEQ, OBC-Youth, PFAI-S, and FNE)

Variable	# Items	Scale Range[a]	Mean	SD	Reliability α
Self-Conscious Emotions					
TOSCA-A[b] Shame	15	15-75	42.81	0.54	.83
TOSCA-A Guilt	15	15-75	58.46	0.46	.79
TOSCA-A Alpha Pride	5	5-25	17.99	0.49	.28
TOSCA-A Beta Pride	5	5-25	19.09	0.48	.33
Authentic Pride Scale	7	1-7	3.58	0.71	.88
Hubristic Pride Scale	7	1-7	1.67	0.66	.87
Self-compassion (SCS)[c]	26	1-5	2.97	0.52	.87
Self-esteem (RSES)	10	0-30	19.82	4.73	.83
Social physique anxiety (SPAS)	9	9-45	27.73	7.93	.89
Obligatory exercise (OEQ)	20	20-80	50.00	9.64	.87
Emotional element	4	4-16	9.21	3.00	.77
Frequency/Intensity	4	4-16	12.19	2.23	.68
Preoccupation	2	2-8	4.07	1.80	.88
Objectified body consciousness (OBC-Youth)	9	1-7	3.81	1.29	.88
Body Surveillance	4	1-7	4.70	1.49	.87
Body Shame	5	1-7	3.10	1.43	.83
Fear of failure (PFAI-S)	5	(-2)- (+2)	0.06	0.84	.81
Fear of negative evaluation (FNE)	12	12-60	37.77	10.22	.93

Note. N = 151. [a]Scale Range refers to the lowest and highest possible score on each scale. [b]*TOSCA-A* refers to the Test of Self-Conscious Affect for Adolescents. [c]For descriptive and reliability information for the SCS subscales, please refer to Appendix P.

The majority of scales and subscales had acceptable internal consistency. All scales had Cronbach's alpha values ranging from α = .77 to .93, except for the OEQ frequency and intensity subscale (α = .69) and the alpha and beta pride scales of the TOSCA-A (α = .28 and .33, respectively). Given these low internal consistency values, the alpha and beta pride subscales were excluded from further analyses. However, initial concerns with these scales prompted the inclusion of alternative measures of pride in the current study, which exhibited a more acceptable reliability (i.e., the Authentic Pride Scale [α = .88] and the Hubristic Pride Scale [α = .87]). The reported values for OBC-Youth contain only the body surveillance and body shame subscales.

3.1.2 Missing Data and Evaluation of Assumptions

Prior to running statistical analyses, the data was screened for missing responses and outliers. Participants with two or more missing data points from at least two of the measures were eliminated from the analysis (three participants). Data was originally collected from 154 athletes; therefore after deleting those with missing data, the final sample size was 151 participants. Those participants who had one missing data point were retained and the missing value was estimated by inserting the mean value from the available data (Tabachnick & Fidell, 2001). Seven replacements were completed (one on the RSES, two on the Authentic and Hubristic Pride Scale, one on the FNE, one on the OBC-Youth, and two on the SCS). Outliers were identified by a standard score greater than 3.29 standard deviations above the mean on any of the measures. There were no outliers in the data set.

Prior to analyses, data were examined for violations of normality. Of the 16 variables explored in this study, 10 were normally distributed (62.5%). Scales with non-parametric distributions included TOSCA-A Shame, Authentic Pride, Hubristic Pride, the OEQ, OEQ preoccupation with exercise subscale, and the OBC-Youth body surveillance subscale (see Table

3.2). The distributions of these scales and subscales were normalized using square root, logarithmic, and inverse transformations, as recommended by Tabachnick and Fidell (2001). The transformations did not significantly change the results of the analyses (when compared to the results without transformations); therefore, all results are reported with the original scale distributions.

Data were also screened for multicollinearity prior to interpretation of regression analyses. Variance inflation factors on each regression indicated that multicollinearity was not an issue (i.e., the values were less than 10 in all cases; Stevens, 1992). Predictor variables were centered prior to being entered into regression analyses examining interaction effects (Aiken & West, 1991).

3.1.3 Tests of Hypotheses

A summary of the findings by hypothesis is presented below. An overview summary of results to guide the hypothesis testing sections is presented in Table 3.3.

3.1.3.1 Hypotheses 1.a.-1.e. – Shame and self-evaluative thoughts and behaviours

The first hypothesis predicted that shame would be positively related to self-evaluative thoughts and behaviours (i.e., social physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation). This hypothesis was partially supported, with four of the 10 variables showing a positive relation with shame (i.e., OEQ emotional element of exercise subscale, OEQ preoccupation with exercise subscale, PFAI-S, and FNE, see Table 3.4).

Table 3.2

Skewness and kurtosis information for scales with non-normal distributions

Variable	$Z_{Skewness}$ *Std. error = .197*	$Z_{Kurtosis}$ *Std. error = .392*
TOSCA-A Shame	2.82*	1.85
Authentic Pride	-2.10*	0.85
Hubristic Pride	8.93*	13.52*
OEQ	3.23*	0.88
OEQ Preoccupation	3.57*	-0.90
OBC-Youth Body surveillance	0.23	-2.77*

Note. Reported skewness and kurtosis statistics were divided by their standard error to obtain a *z*-value, as recommended by Tabachnick and Fidell (2001), to determine whether to be classified as having skewness or kurtosis. A resulting value of +/- 1.96 is determined as having significant skewness or kurtosis and are marked by asterisks.

Table 3.3

Summary of results by hypothesis

Hypothesis	Supported?	Notable Data
1. Shame was expected to be *positively* related to:		
a. Social physique anxiety	X	
b. Obligatory exercise	X	
Emotional element	√	$r = .22$, $p < .01$
Frequency/Intensity	X	
Preoccupation	√	$r = .22$, $p < .01$
c. Objectified body consciousness	X	
Body surveillance	X	
Body shame	X	
d. Fear of failure	√	$r = .26$, $p < .01$
e. Fear of negative evaluation	√	$r = .21$, $p < .01$
2. Guilt was expected to be n*egatively* related to:		
a. Social physique anxiety	X	
b. Obligatory exercise	X	
Emotional element	X	
Frequency/Intensity	X	$r = .17$, $p < .05^{\dagger}$
Preoccupation	X	
c. Objectified body consciousness	√	$r = -.20$, $p < .05$
Body surveillance	X	
Body shame	√	$r = -.21$, $p < .05$
d. Fear of failure	X	
e. Fear of negative evaluation	X	
3. a. Authentic pride was expected to display similar relations to guilt – *negative* relations with:		
i. Social physique anxiety	√	$r = -.39$, $p < .01$
ii. Obligatory exercise	X	
Emotional element	X	
Frequency/Intensity	√	$r = .23$, $p < .01^{\dagger}$
Preoccupation	X	
iii. Objectified body consciousness	√	$r = -.34$, $p < .01$
Body surveillance	√	$r = -.29$, $p < .01$
Body shame	√	$r = -.31$, $p < .01$
iv. Fear of failure	√	$r = -.38$, $p < .01$
v. Fear of negative evaluation	√	$r = -.37$, $p < .01$

Table 3.3 continued

3. b. Hubristic pride was expected to display similar relations to guilt – *positive* relations with:		
i. Social physique anxiety	X	
ii. Obligatory exercise	X	
Emotional element	X	
Frequency/Intensity	X	
Preoccupation	X	
iii. Objectified body consciousness	√	$r = .32$, $p < .01$
Body surveillance	√	$r = .23$, $p < .01$
Body shame	√	$r = .32$, $p < .01$
iv. Fear of failure	√	$r = .20$, $p < .05$
v. Fear of negative evaluation	√	$r = .21$, $p < .01$
4. a. Self-compassion was expected to be *inversely* related to shame.	√	$r = -.29$, $p < .01$
b. Self-compassion was expected to be *inversely* related to guilt.	X	
c. Relation between self-compassion and authentic pride – *exploratory*.	-	$r = .42$, $p < .01$
c. Relation between self-compassion and hubristic pride – *exploratory*.	-	
5. Self-compassion was expected to be *negatively* related to the self-evaluative thoughts and behaviours:		
a. Social physique anxiety	√	$r = -.37$, $p < .01$
b. Obligatory exercise	X	
Emotional element	X	
Frequency/Intensity	X	
Preoccupation	X	
c. Objectified body consciousness	√	$r = -.54$, $p < .01$
Body surveillance	√	$r = -.50$, $p < .01$
Body shame	√	$r = -.46$, $p < .01$
d. Fear of failure	√	$r = -.57$, $p < .01$
e. Fear of negative evaluation	√	$r = -.48$, $p < .01$

Table 3.3 continued

6. Self-compassion was expected to explain *unique variance* beyond self-esteem on the self-evaluative thoughts and behaviours:		
a. Social physique anxiety	X	
b. Obligatory exercise	X	
Emotional element	X	
Frequency/Intensity	X	
Preoccupation	X	
c. Objectified body consciousness	√	$\Delta R^2 = .070$, $p < .01$
Body surveillance	√	$\Delta R^2 = .094$, $p < .01$
Body shame	√	$\Delta R^2 = .031$, $p < .05$
d. Fear of failure	√	$\Delta R^2 = .106$, $p < .01$
e. Fear of negative evaluation	√	$\Delta R^2 = .063$, $p < .01$
7. a. Self-compassion was hypothesized to show *moderating effects* on the relations between *shame* and the self-evaluative thoughts and behaviours:		
a. Social physique anxiety	X	
b. Obligatory exercise	√	$\Delta R^2 = .058$, $p < .01$
Emotional element	X	
Frequency/Intensity	√	$\Delta R^2 = .060$, $p < .01$
Preoccupation	X	
c. Objectified body consciousness	X	
Body surveillance	X	
Body shame	X	
d. Fear of failure	X	
e. Fear of negative evaluation	X	
7. b. Self-compassion was hypothesized to show *moderating effects* on the relations between *guilt* and the self-evaluative thoughts and behaviours:		
a. Social physique anxiety	X	
b. Obligatory exercise	X	
Emotional element	X	
Frequency/Intensity	X	
Preoccupation	X	
c. Objectified body consciousness	X	
Body surveillance	X	
Body shame	X	
d. Fear of failure	X	
e. Fear of negative evaluation	X	

Note: †Correlation significant in the opposite direction expected.

Table 3.4

Pearson product moment correlations for TOSCA-A, Pride scales, SCS, RSES, SPAS, OEQ and subscales, OBC-Youth and subscales, PFAI-S, and FNE

Variable	1a.	1b.	2a.	2b.	3.	4.	5.	6a.	6b.	6c.	6d.	7a.	7b.	7c.	8.	9.
TOSCA-A																
1a. Shame	----															
1b. Guilt	.32**	----														
PRIDE SCALES																
2a. Authentic	-.10	.15	----													
2b. Hubristic	-.02	-.36**	-.21*	----												
3. SCS	-.32**	.15	.42**	-.09	----											
4. RSES	-.29**	.11	.72**	-.24**	.60**	----										
5. SPAS	.14	-.02	-.39**	.04	-.37**	-.52**	----									
6a. OEQ	.14	.16	.12	.01	.04	.05	.18*	----								
6b. Emotional element	.22**	.15	-.05	.10	-.16	-.25**	.40**	.76**	----							
6c. Frequency/Intensity	-.01	.17*	.23**	-.12	.10	.22**	.01	.75**	.39**	----						
6d. Preoccupation	.22**	.16	.09	.09	.16	.10	.12	.74**	.50**	.41**	----					
7a.OBC-Youth	.14	-.20*	-.34**	.32**	-.54**	-.54**	.58**	.21**	.46**	.01	.14	----				
7b. Body surveillance	.13	-.13	-.29**	.23**	-.50**	-.42**	.45**	.22**	.37**	.11	.15	.86**	----			
7c. Body shame	.12	-.21*	-.31**	.32**	-.46**	-.53**	.56**	.17*	.44**	-.08	.11	.90**	.56**	----		
8. PFAI-S	.26**	-.16	-.38**	.20*	-.57**	-.51**	.45**	.09	.31**	-.03	.08	.59**	.55**	.50**	----	
9. FNE	.21**	-.07	-.37**	.21**	-.48**	-.47**	.61**	.17*	.36**	.06	.12	.68**	.66**	.54**	.56**	----

Note. (N = 151). * p <.05. ** p <.01. *TOSCA-A* refers to the Test of Self-Conscious Affect for Adolescents. *Pride Scales* refer to Authentic and Hubristic Pride Scales. *SCS* refers to the Self-Compassion Scale. *RSES* refers to the Rosenberg Self-Esteem Scale. *SPAS* refers to the Social Physique Anxiety Scale. *OEQ* refers to the Obligatory Exercise Questionnaire. *OBC-Youth* refers to the Objectified Body Consciousness Scale for Youth. *PFAI-S* refers to the Performance Failure Appraisal Inventory (Short Form). *FNE* refers to the Brief Fear of Negative Evaluation Scale. Item 6a takes into account the entire OEQ, while items 6b-6d are subscales of the OEQ. Item 7a takes into account the entire OBC, while items 7b and 7c are subscales of the OBC. For a complete correlation table that includes all scales and subscales see Appendix Q. Select subscales were not included in the analyses because they did not directly address the hypotheses.

3.1.3.2 Hypotheses 2.a.-2.e. – Guilt and self-evaluative thoughts and behaviours

Guilt was expected to be negatively related to the self-evaluative thoughts and behaviours (i.e., social physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation). There was also partial support for this hypothesis, with two of the 10 variables showing a negative relation with guilt (i.e., OBC-Youth body surveillance subscale and OBC-Youth body shame subscale, see Table 3.4[8]). Only the relation between guilt and OEQ frequency and intensity was significant in the opposite direction expected (i.e., the relation was positive).

3.1.3.3 Hypotheses 3.a. and 3.b. – Pride and self-evaluative thoughts and behaviours

Due to the distinctions between authentic and hubristic pride and the potential parallel with guilt and shame, respectively, it was expected authentic pride would have similar relations to guilt (i.e., a negative relationship to self-evaluative thoughts and behaviours) and hubristic pride would have relations that reflected those of shame (i.e., a positive relation to self-evaluative thoughts and behaviours). Relations with authentic and hubristic pride partially supported this expectation. Six of the 10 variables demonstrated significant negative relations with authentic pride (i.e., SPAS, OBC-Youth, OBC-Youth body surveillance subscale, OBC-Youth body shame subscale, PFAI-S, and FNE) and five of the 10 variables demonstrated significant positive relations with hubristic pride (i.e., OBC-Youth, OBC-Youth body surveillance subscale, OBC-Youth body shame subscale, PFAI-S, and FNE, see Table 3.4). There was a significant relation in the opposite direction as hypothesized between authentic pride and OEQ frequency and intensity (i.e., a positive relation).

[8] The notion of "shame-free guilt" (Tangney & Dearing, 2002) was also explored using semi-partial correlations to account for the influence of shame on levels of guilt. Shame-free guilt showed significant negative relations to OBC body surveillance (r = -.18, p <.05) and PFAI-S (r = -.25, p <.01).

Authentic pride was hypothesized to mirror guilt and they showed similar significant relations on two constructs. Both guilt and authentic pride showed significant positive relations with OBC-Youth (r = -.34, p <.01) and OBC-Youth body shame subscale (r = -.31, p <.01). Similar to shame, hubristic pride was positively related to PFAI-S (r = .20, p <.01), and FNE (r = .21, p <.01), which provides some support for the hypothesis that hubristic pride would mirror shame in relations with self-evaluative thoughts and behaviours.

3.1.3.4 Hypotheses 4.a.-4.d. – Self-compassion and self-evaluative thoughts and behaviours

The fourth hypothesis predicted self-compassion to be inversely related to shame and guilt because of its theorized role as a potential buffer against self-evaluation. Results demonstrate partial support for this hypothesis (see Table 3.4). There was a significant negative relation between shame and self-compassion (r = -.29, p <.01), which supports the hypothesis. However, in contrary to the hypothesis, guilt was not significantly related to self-compassion (r = .15, *n.s.*).

Exploratory analyses for pride showed a positive relation between authentic pride and self-compassion (r = .42, p <.01). There was no significant relation between hubristic pride and self-compassion (r = -.09, *n.s.*). Thus, the prediction that authentic pride and hubristic pride would mirror guilt and shame, respectively, was not supported.

3.1.3.5 Hypotheses 5.a.-5.e. – Self-compassion and self-evaluative thoughts and behaviours

It was expected that self-compassion would be negatively related to the self-evaluative thoughts and behaviours because of the theorized potential of self-compassion to act as a buffer against self-compassion. There was partial support for the hypothesis, as self-compassion

exhibited inverse relationships on six of the 10 subscales (i.e., SPAS, OBC-Youth, OBC-Youth body surveillance subscale, OBC-Youth body shame subscale, PFAI-S, and FNE, see Table 3.4). In contrast with the hypothesis, significant negative relations were not shown with the OEQ or its subscales (see Table 3.4).

3.1.3.6 Age and self-evaluative thoughts and behaviours, self-conscious emotions, and self-compassion

Age was not significantly correlated with TOSCA-A shame, TOSCA-A guilt, Authentic Pride Scale, Hubristic Pride Scale, SCS, or any of the self-evaluative thoughts and behaviours. One-way ANOVA did not show any differences between age groups (age 13, 14, 15, 16, 17, and 18) on any variable in the study. Small sample sizes can increase the vulnerability to assumption violations (e.g., normal distribution of the dependent variable, all groups show approximately equal variances on the dependent variable; Diekhoff, 1992). At least 15 cases per group is deemed reasonably large (Diekhoff, 1992); thus, the analysis was also run with only the groups that met this criterion (i.e., the 13 year olds and 18 year olds were removed). Again, no significant differences between age groups were found.

Independent samples *t*-tests showed significant differences between pre-menarcheal and post-menarcheal participants on SCS (F[140] = 7.092, p <.01, t[15.875] = 3.204, p < .01, pre-menarcheal M = 3.20 [SD = 0.18], post-menarcheal M = 2.94 [SD = 0.54]), OBC-Youth (F[140] = 4.034, p <.05, t[9.488] = -3.737, p < .01, pre-menarcheal M = 2.76 [SD = 0.76], post-menarcheal M = 2.85 [SD = 1.27]), OBC-Youth body surveillance (F[140] = 1.308, p <.05, t[140] = -2.679, p < .01, pre-menarcheal M = 3.38 [SD = 1.15], post-menarcheal M = 4.79 [SD = 1.46]), PFAI-S (F[140] = 0.009, p <.05, t[140] = -2.468, p < .05, pre-menarcheal M = -0.60 [SD = 0.83], post-menarcheal M = 0.12 [SD = 0.80]), and FNE (F[140] = 0.002, p <.05, t[140] = -

2.141, $p < .05$, pre-menarcheal $M = 30.50$ [$SD = 9.47$], post-menarcheal $M = 38.21$ [$SD = 9.92$]). Removal of pre-menarcheal participants only significantly changed two correlational results (TOSCA-A Shame and FNE were no longer significantly related and TOSCA-A Guilt and PFAI-S were now significantly negatively related [$r = -.18$, $p < .05$]). All results must be interpreted with caution, however, as the sample size for pre-menarcheal participants was low ($n = 8$).

3.1.3.7 Hypotheses 6.a.-6.e. – Unique variance accounted for by self-compassion

Self-compassion was expected to explain variance beyond self-esteem on the self-evaluative thoughts and behaviours. Multiple regression analyses indicated partial support for this hypothesis. Self-compassion accounted for variance beyond self-esteem on five of the 10 variables (i.e., OBC-Youth, OBC-Youth body surveillance subscale, OBC-Youth body shame subscale, PFAI-S, and FNE), supporting the hypothesis. The full models for these five variables accounted for between 26.9% and 36.5% of the variance (see Table 3.5). Self-compassion explained an additional 3.1% to 10.6% beyond self-esteem for models in which there was a significant ΔR^2 in Step 2 (see Table 3.5). Self-compassion did not add significant unique variance beyond self-esteem on the SPAS, the OEQ, or the OEQ subscales, although self-esteem was significant predictor of variance on each of the models (see Table 3.5).[9]

3.1.3.8 Hypotheses 7.a.i.-7.b.v. – Moderation/Interaction effects

Self-compassion was hypothesized to show interaction effects on the relations between guilt and shame and social physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation. Separate regression analyses revealed weak

[9] The regression analysis was also performed with SCS entered in Step 1 and RSES entered in Step 2 to explore the unique variance accounted for by RSES. RSES explained an additional 2.3% to 14.5% beyond SCS for models in which there was a significant ΔR^2 in Step 2 (SPAS, $\Delta R^2 = .145$, $p < .01$; OEQ emotional element, $\Delta R^2 = .038$, $p < .05$; OEQ frequency/intensity, $\Delta R^2 = .040$, $p < .05$; OBC-Youth, $\Delta R^2 = .024$, $p < .05$; OBC-Youth body surveillance, $\Delta R^2 = .023$, $p < .05$; OBC-Youth body shame, $\Delta R^2 = .099$, $p < .01$; PFAI-S, $\Delta R^2 = ..044$, $p < .01$; FNE, $\Delta R^2 = .051$, $p < .01$). RSES did not add significant unique variance beyond SCS on the OEQ or OEQ preoccupation.

Table 3.5

Summary of Hierarchical Regression Analysis Exploring the Influence of Self-Compassion beyond Self-esteem for SPAS, OEQ and OEQ subscales, OBC-Youth and OBC-Youth subscales, PFAI-S, and FNE

	Predictor Variable	B	SE B	β	R^2	Adjusted R^2	ΔR^2
SPAS	Step 1				.275**	.270	.275**
	RSES	-8.789	1.170	-.524**			
	Step 2				.279	.269	.004
	RSES	-7.992	1.465	-.477**			
	SCS	-1.197	1.323	-.079			
OEQ	Step 1				.003	-.004	.003
	RSES	1.085	1.667	.051			
	Step 2				.003	-.001	.000
	RSES	0.958	2.093	.047			
	SCS	0.116	1.890	.006			
OEQ Emotional Element subscale	Step 1				.063**	.057	.063**
	RSES	-1.595	0.503	-.252**			
	Step 2				.063	.051	.000
	RSES	-1.556	0.631	-.246**			
	SCS	-0.058	0.570	-.010			
OEQ Frequency and Intensity subscale	Step 1				.048**	.042	.048**
	RSES	1.032	0.377	.219**			
	Step 2				.050	.037	.002
	RSES	1.180	0.473	.250*			
	SCS	-0.222	0.427	-.521			
OEQ Preoccupation subscale	Step 1				.009	.009	.009
	RSES	0.368	0.311	.096			
	Step 2				.024	.024	.015
	RSES	0.018	0.387	.005			
	SCS	0.526	0.350	.153			

Table 3.5 Continued

	Predictor Variable	B	SE B	β	R^2	Adjusted R^2	ΔR^2
OBC-Youth	Step 1				.291**	.286	.291**
	RSES	-1.472	0.188	-.540**			
	Step 2				.362**	.353	.070**
	RSES	-0.927	0.224	-.340**			
	SCS	-0.818	0.202	-.332**			
OBC-Youth Body Surveillance subscale	Step 1				.176**	.170	.176**
	RSES	-1.322	0.235	-.419**			
	Step 2				.269**	.259	.094**
	RSES	-0.596	0.278	-.189*			
	SCS	-1.092	0.251	-.383**			
OBC-Youth Body Shame subscale	Step 1				.275**	.271	.275**
	RSES	-1.591	0.211	-.525**			
	Step 2				.306*	.297	.031*
	RSES	-1.192	0.260	-.393**			
	SCS	-0.599	0.235	-.219*			
PFAI-S	Step 1				.259**	.254	.259**
	RSES	-0.909	0.126	-.509**			
	Step 2				.365**	.357	.106**
	RSES	-0.472	0.146	-.264**			
	SCS	-0.657	0.132	-.407**			
FNE	Step 1				.221**	.216	.221**
	RSES	-10.151	1.562	-.470**			
	Step 2				.283**	.273	.062**
	RSES	-6.092	1.881	-.282**			
	SCS	-6.099	1.699	-.313**			

Note. * p <.05. ** p <.01. *TOSCA-A* refers to the Test of Self-Conscious Affect for Adolescents. *Pride Scales* refer to Authentic and Hubristic Pride Scales. *SCS* refers to the Self-Compassion Scale. *RSES* refers to the Rosenberg Self-Esteem Scale. *SPAS* refers to the Social Physique Anxiety Scale. *OEQ* refers to the Obligatory Exercise Questionnaire. *OBC-Youth* refers to the Objectified Body Consciousness Scale for Youth. *PFAI-S* refers to the Performance Failure Appraisal Inventory (Short Form). *FNE* refers to the Brief Fear of Negative Evaluation Scale.

support for this hypothesis. A summary of the regression analyses for shame and guilt are provided in Tables 3.6 and 3.7, respectively. Significant main effects were found for shame on the OEQ emotional element of exercise, OEQ preoccupation with exercise, PFAI-S, and FNE (see Table 3.6). Self-compassion was a significant predictor on Step 2 for social physique anxiety, preoccupation with exercise, objectified body consciousness, body surveillance, body shame, fear of failure, and fear of negative evaluation (see Table 3.6).

A significant interaction effect was found for two of the 10 variables for shame (i.e., OEQ and OEQ frequency and intensity of exercise), providing partial, but weak, support for the hypothesis (see Tables 3.8 and 3.9 for full regression models). To analyze the meaning of the interaction effects further, regression lines were completed for high, moderate, and low self-compassion (using 1 standard deviation above the mean, the mean, and 1 standard deviation below the mean as suggested by Aiken & West, 1991, see Figures 3.1 and 3.2 for graphs and Appendix R for calculations[10]).

Post hoc probing, as outlined by Aiken and West (1991), of significant shame interactions allowed for the examination of whether the slope of each regression line was significantly different from zero. This procedure involved calculation of the standard errors of the simple slopes of the simple regression equations in order to perform *t*-tests for the significance of the simple slopes (Aiken & West, 1991). Results showed that the simple slope for low self-compassion was significantly different from zero for OEQ and shame ($t = 3.39$, $p < .05$), as well as for OEQ frequency and intensity of exercise and shame ($t = 2.02$, $p < .05$). Thus, at low levels of self-compassion, there is a positive relation between OEQ and shame, as well as

[10] For the interested reader, see Appendix S for instructions on the derivation of the interaction calculations.

Table 3.6

Summary of multiple regression analyses exploring the interaction effects of self-compassion on the relations between shame and self-evaluative thoughts and behaviours

Dependent variable	Step 1 (Shame)			Step 2 (Self-compassion)			Step 3 (Interaction term)		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
SPAS	-	-	-	-.356**	.134**	.114**	-	-	-
OEQ	-	-	-	-	-	-	.252**	.084**	.058**
OEQ Emotional Element of Exercise Subscale	.224**	.050**	.050**	-	-	-	-	-	-
OEQ Frequency and Intensity Subscale	-	-	-	-	-	-	-.253**	.070**	.060**
OEQ Preoccupation with Exercise Subscale	.218**	.047**	.047**	.249**	.103**	.056**	-	-	-
OBC-Youth	-	-	-	-.547**	.289**	.269**	-	-	-
OBC Body Surveillance Subscale	-	-	-	-.506**	.247**	.231**	-	-	-
OBC Body Shame Subscale	-	-	-	-.463**	.208**	.193**	-	-	-
PFAI-S	.264**	.070**	.070**	-.536**	.329**	.259**	-	-	-
FNE	.212**	.045**	.045**	-.461**	.236**	.191**	-	-	-

Note. ** p <.01. *SPAS* refers to the Social Physique Anxiety Scale. *OEQ* refers to the Obligatory Exercise Questionnaire. *OBC-Youth* refers to the Objectified Body Consciousness Scale for Youth. *PFAI-S* refers to the Performance Failure Appraisal Inventory (Short Form). *FNE* refers to the Brief Fear of Negative Evaluation Scale.

Table 3.7

Summary of multiple regression analyses exploring the interaction effects of self-compassion on the relations between guilt and self-evaluative thoughts and behaviours

Dependent variable	Step 1 (Guilt)			Step 2 (Self-compassion)			Step 3 (Interaction term)		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
SPAS	-	-	-	-.370**	.135**	.134**	-	-	-
OEQ	-	-	-	-	-	-	-	-	-
OEQ Emotional Element of Exercise Subscale	-	-	-	-.183*	.055*	.033*	-	-	-
OEQ Frequency and Intensity Subscale	.169*	.029*	.029*	-	-	-	-	-	-
OEQ Preoccupation with Exercise Subscale	-	-	-	-	-	-	-	-	-
OBC-Youth	-.195*	.038*	.038*	-.519**	.302**	.264**	-	-	-
OBC Body Surveillance Subscale	-	-	-	-.506**	.247**	.231**	-	-	-
OBC Body Shame Subscale	-.207*	.043	.043	-.434**	.228**	.185**	-	-	-
PFAI-S	-	-	-	-.555**	.326**	.302**	-	-	-
FNE	-	-	-	-.482**	.232**	.227**	-	-	-

Note. * p <.05. ** p <.01. *SPAS* refers to the Social Physique Anxiety Scale. *OEQ* refers to the Obligatory Exercise Questionnaire. *OBC-Youth* refers to the Objectified Body Consciousness Scale for Youth. *PFAI-S* refers to the Performance Failure Appraisal Inventory (Short Form). *FNE* refers to the Brief Fear of Negative Evaluation Scale.

Table 3.8

Summary of hierarchical regression analysis of shame and self-compassion on prediction of objectified body consciousness (OEQ)

Predictor variable	B	SE B	β	R^2	ΔR^2
Step 1				.019	.019
Shame	2.47	1.45	.138		
Step 2				.026	.007
Shame	2.95	1.52	.166		
SCS	1.60	1.57	.087		
Step 3				.084**	.058**
Shame	2.49	1.49	.143		
SCS	2.43	1.59	.153		
Shame x SCS	-7.11	2.34	.252**		

Note. ** p <.01.

Table 3.9
Summary of hierarchical regression analysis of shame and self-compassion on prediction of frequency and intensity of exercise (OEQ frequency and intensity subscale)

Predictor variable	B	SE B	β	R^2	ΔR^2
Step 1				.000	.000
Shame	-.037	.338	-.009		
Step 2				.010	.010
Shame	.100	.355	.024		
SCS	.451	.367	.106		
Step 3				.070**	.060**
Shame	-.008	.347	-.002		
SCS	.650	.363	.153		
Shame x SCS	-1.681	.545	-.253**		

Note. ** p <.01.

Figure 3.1

Interaction effect of self-compassion and shame on obligatory exercise (OEQ)

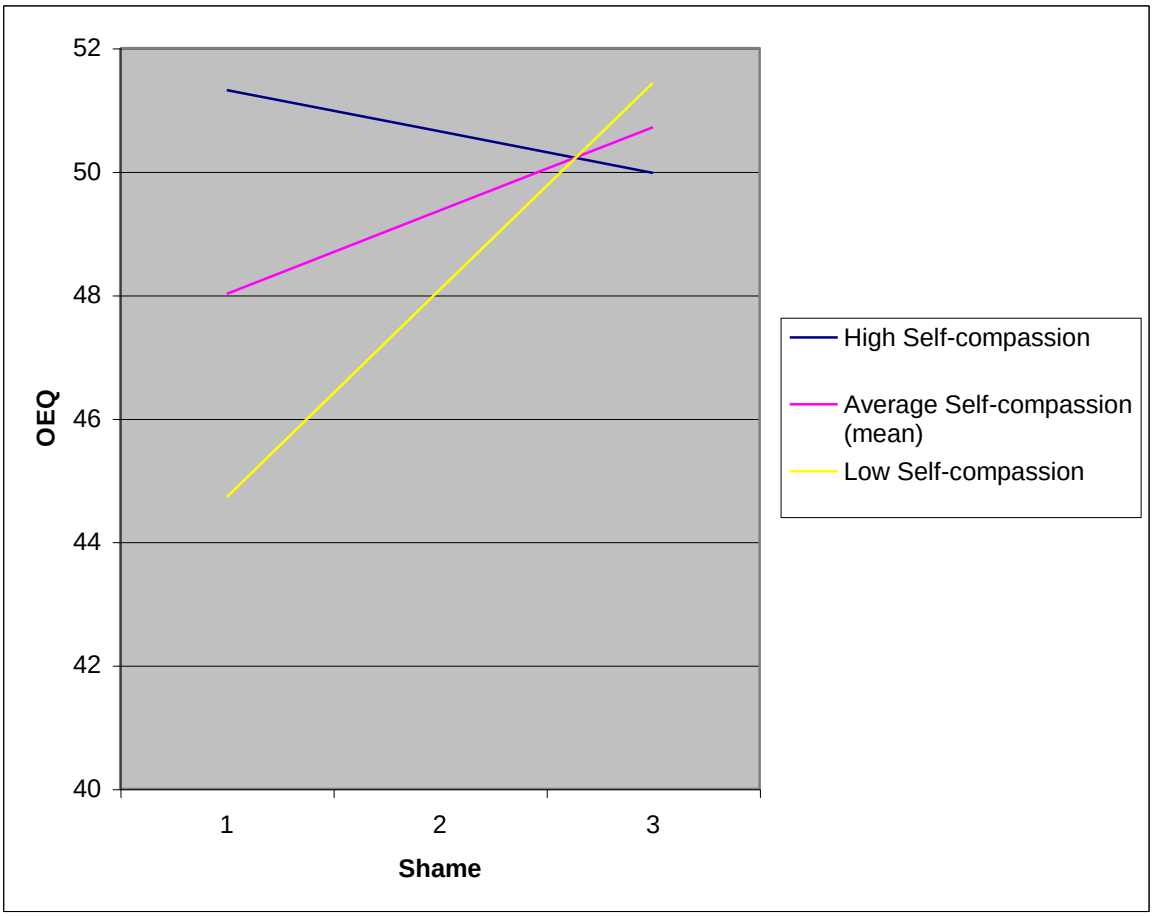
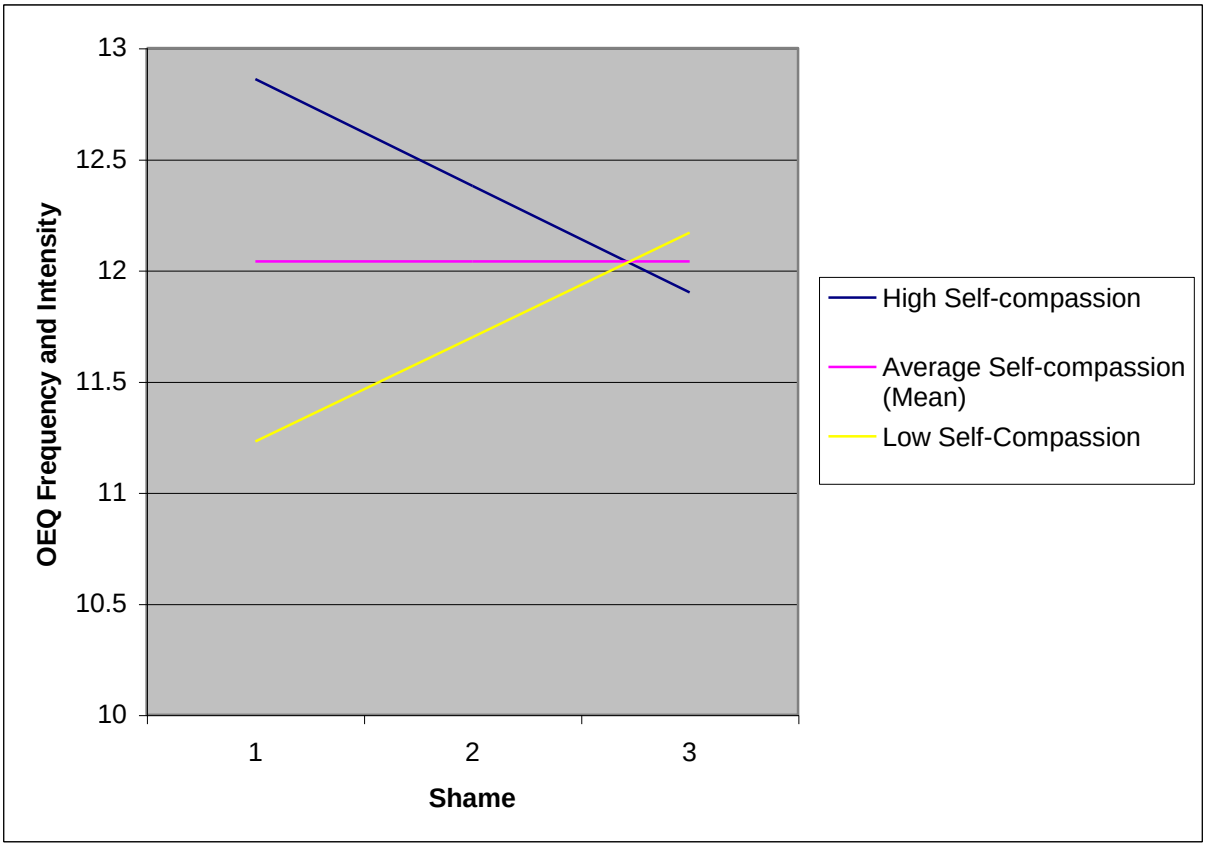


Figure 3.2

Interaction effect of self-compassion and shame on frequency and intensity of exercise (OEQ Frequency and Intensity subscale)



between OEQ frequency and intensity of exercise and shame.[11] The simple slope for average (mean) self-compassion was not significantly different from zero for either OEQ and shame (t = 1.67, *n.s.*), or for OEQ frequency and intensity of exercise and shame (t = -0.02, *n.s.*). Similar results were found for high self-compassion: the simple slope for high self-compassion was not significantly different from zero for either OEQ and shame (t = -.06, *n.s.*), or for OEQ frequency and intensity of exercise and shame (t = -1.89, *n.s.*).

Significant main effects for guilt (Step 1) were found for OEQ frequency and intensity of exercise, OBC-Youth, and OBC-Youth body shame (Table 3.7). Main effects for self-compassion (Step 2) when exploring the relation between guilt and self-evaluative thoughts and behaviours were found for SPAS, OEQ emotional element of exercise, OBC-Youth, OBC-Youth body surveillance, OBC-Youth body shame, PFAI-S, and FNE (see Table 3.7). No significant interaction effects were found between guilt and the self-evaluative thoughts and behaviours, which does not support the hypothesis (see Table 3.7).

3.2 DISCUSSION

The purpose of this study was to gain a deeper understanding of young women's emotional experiences in sport. More specifically, this study explored the relation between self-conscious emotions (i.e., guilt, shame, authentic pride, and hubristic pride) and self-evaluative thoughts and behaviours (i.e., social physique anxiety, obligatory exercise, objectified body consciousness, fear of failure, and fear of negative evaluation). The potential of self-compassion

[11] Post-hoc correlational analysis provides further support and explanation of these findings by looking at the relation between shame and OEQ and the relation between shame and OEQ frequency and intensity of exercise with three groups: low self-compassion (i.e., one standard deviation below the mean, n = 28), medium self-compassion (i.e., between one standard deviation below the mean and one standard deviation above the mean, n = 102), and high self-compassion (i.e., greater than one standard deviation above the mean, n = 21). A significant relation was found between shame and obligatory exercise for low self-compassion (r = .47, p <.05). No other significant relations were found.

to explain variance beyond self-esteem and the moderating effects of self-compassion on these relations were also explored.

The findings of the present study add three key contributions to the literature. First, it provides support for the relevance of the self-conscious emotions in the lives of young women involved in sport. The young women in this study displayed levels of shame and guilt similar to those in other populations (as discussed in more detail below). Second, this study extends knowledge of self-compassion, a relatively new construct in Western culture, to young women in sport. At the same time the present study increases understanding of young women's experiences in sport by looking beyond self-esteem. And lastly, this study helps to better understand the link between the self-conscious emotions and self-compassion, resulting in insight into the potential of self-compassion as a resource for young women athletes. Self-compassion may be a useful construct in the sport domain, given its accepting, non-evaluative nature (Neff, 2003b), as well as with adolescent athletes, since it is suggested that self-compassion may be helpful, but low during this point in the lifespan (Neff, 2003b). Taken together, results suggest that self-compassion may play an important role in understanding and conceptualizing young women athletes' emotional experiences.

The present findings suggest that the young women's levels of self-conscious emotions in this study are similar to those found in comparable studies, while levels of self-compassion and self-esteem are slightly lower. The mean value for shame (M = 42.81) falls within a range found in previous research with young women in grade seven through first year university (M = 34.74 to 45.11; Tangney & Dearing, 2002; Walter & Burnaford, 2006; see Table 3.10). This trend was also seen with guilt, as the mean (M = 58.46) fell within previously reported ranges (M = 54.32 to 61.28; Tangney & Dearing, 2002; Walter & Burnaford, 2006; see Table 3.10). The mean for

Table 3.10

Comparison of Means for Self-conscious Emotions (TOSCA-A Shame, TOSCA-A Guilt, Authentic Pride, and Hubristic Pride), Self-compassion (SCS), and Self-esteem (RSES).

Variable	Mean	Walter & Burnaford (2006)	Tangney & Dearing (2002)	Tracy & Robins (2007)[h]	Neff (2003a)[h]	Leary et al. (2007)[h]	Huang et al. (2007)[i]	Steese et al (2006)[i]
TOSCA-A Shame	42.81	43.53[a] 37.79[b] 45.11[c] 42.75[d]	38.16[e] 39.82[f] 34.74[g]					
TOSCA-A Guilt	58.46	54.32[a] 57.58[b] 61.28[c] 57.78[d]	57.33[e] 60.05[f] 59.05[g]					
Authentic Pride	3.58			3.11 4.20				
Hubristic Pride	1.67			1.57 1.57				
SCS	2.97				3.04	3.15 3.03 3.25 3.28 3.08		
RSES	19.82						20.50	22.94 23.16

Note. [a] Grade 8 women. [b] Grade 10 women. [c] 1st year college women. [d] Total sample (grade 8 to 1st year college). [e] Women in grades 7 to 11. [f] 1st year college women in psychology. [g] Women aged 18-21. [h] Women undergraduate students. [i] Adolescent women. *TOSCA-A* refers to the Test of Self-Conscious Affect for Adolescents. *Pride Scales* refer to Authentic and Hubristic Pride Scales. *SCS* refers to the Self-Compassion Scale. *RSES* refers to the Rosenberg Self-Esteem Scale.

authentic pride (*M* = 3.58) was also within a previous reported range (*M* = 3.11 to 4.20) in research with women undergraduate students (Tracy & Robins, 2007). Hubristic pride (*M* = 1.67) was also consistent with previous work with undergraduate women (*M* = 1.57). The mean value for self-compassion (*M* = 2.97) was slightly lower than those in studies with undergraduate women (*M* = 3.03 to 3.28; Leary et al., 2007; Neff, 2003a), but is still fairly similar (see Table 3.10). It has been suggested that adolescence is a time when self-compassion may be at its lowest (Neff, 2003b); therefore, it is not surprising that the adolescents' values in the present study are slightly lower than those found with women undergraduate students. The mean value for self-esteem (*M* = 19.82) was also only slightly lower than previously reported means in adolescent populations (*M* = 20.5 to 23.16; Huang, Norman, Zabinski, Calfas, & Patrick, 2007; Steese, Dollette, Phillips, Hossfeld, Matthews, & Toarmina, 2006; see Table 3.10).

Sport can be very evaluative given the performance and appearance issues associated with being an athlete in that context (Krane et al., 2001). Also, adolescence is a time of evaluation and comparison (Brown & Lohr, 1987; Harter, 1990). Taken together, it is likely that evaluation plays a major role in the lives of young women involved in sport. Where is this evaluation and the resulting emotion manifested? The results of this study show a number of cognitive, behavioural, and emotional constructs linked to the self-conscious emotions, all of which have a foundation in evaluation.

Results highlight that shame and guilt were related in different ways to self-evaluative thoughts and behaviours for the young women athletes in this study. It was hypothesized that shame would demonstrate positive relations with the self-evaluative thoughts and behaviours due to its maladaptive tendencies (Tracy & Robins, 2007), whereas guilt, conceptualized as being more adaptive (Tracy & Robins, 2007), would have negative relations with the self-evaluative

thoughts and behaviours. These hypotheses received some support. Shame was positively related to emotional element of exercise, preoccupation with exercise, fear of failure, and fear of negative evaluation. Guilt was negatively related to objectified body consciousness and body shame. The positive relations with shame and the negative relations with guilt suggest that, for young women involved in sport, shame is less adaptive than guilt, supporting previous contentions (Tracy & Robins, 2007). There was, however, an unexpected positive relation exhibited between guilt and frequency and intensity of exercise, suggesting that for young women athletes, frequency and intensity of exercise may not be as negative an aspect of obligatory exercise as suggested by the OEQ measure. Or, conversely, this could be a case where guilt is not necessarily adaptive (Tangney, 1990). Given that guilt is associated with reparative actions (Barrett, 1995; Doosje et al., 1998; Tangney, 1990; Tracy & Robins, 2004), the positive association with the behavioural construct of frequency and intensity of exercise seems to make sense. The behaviour may be the reparative action to deal with the guilt.

The positive relations between shame and emotional element of exercise and preoccupation with exercise and the lack of relation between shame and frequency and intensity of exercise provide further reason to infer that frequency and intensity of exercise may not always be a negative aspect of obligatory exercise for young women involved in sport[12]. Steffen and Brehm (1999) found that the frequency and intensity of exercise seems to function as a protective factor against eating disordered attitudes and behaviours. They assert that adolescents who exercise hard and often, but with a positive attitude are at less of a risk for disordered eating. Thus, research with young women linking exercise and eating disorders suggests the amount of

[12] It is recognized that an excessive frequency and intensity of exercise can become problematic and is likely an issue surrounding obligatory exercise. However, the frequency and intensity of exercise captured by the OEQ may not be as maladaptive as expected. While it may be that frequency and intensity of exercise is not negative, it could also be that the OEQ measure does not have the sensitivity to distinguish positive, regular exercise habits from excessive ones.

excessive exercise may not be as important as the emotions related to the exercise activity (Steffen & Brehm, 1999). Preoccupation with exercise exhibits similar relations as the emotional element of exercise on the Eating Disorders Inventory, drive for thinness, bulimia, body dissatisfaction, ineffectiveness, interoceptive awareness, and maturity fears, although preoccupation with exercise usually results in associations of a lesser magnitude (Steffen & Brehm, 1999). Frequency and intensity of exercise does not show these same relations. Frequency and intensity of exercise is negatively associated with the Eating Disorders Inventory, drive for thinness, body dissatisfaction, ineffectiveness, interpersonal distrust, introceptive awareness, and maturity fears (Steffen & Brehm, 1999).

Despite the questionable adaptiveness of frequency and intensity of exercise, the emotional element of exercise and preoccupation with exercise seem to be aspects of obligatory exercise that are negative for young women involved in sport. The results of the present study suggest that emotional element of exercise and preoccupation with exercise are related to the maladaptive emotion of shame and not to the more adaptive guilt. However, the emotional element of exercise has been described as "a sense of guilt and related negative emotion associated with either a missed exercise session or an overeating episode" (Steffen & Brehm, 1999, p. 225). Taken together, it seems that young women athletes' emotion related to obligatory exercise is not limited to guilt, and that shame may actually be more central to obligatory exercise.

The central role of shame seems not to be limited to obligatory exercise, as it extends to fear of failure as well. Increased shame was associated with an increased fear of failure in the present study, which aligns with previous findings (McGregor & Elliot, 2005) and supports the contention that shame is the core emotion in fear of failure (McGregor & Elliot, 2005).

Additionally, since shame involves a negative evaluation of the entire self, not just a particular aspect (Tangney, 1990), a failure would be particularly devastating; and thus, it is not surprising that one would develop a strong aversion to failure. Fear of failure may also lead to more shame, as past research has found that undergraduate students high in fear of failure experience more shame upon a perceived failure than those low in fear of failure (McGregor & Elliot, 2005).

The relation between shame and constructs involving fear are not limited to fear of failure. Shame also exhibited a positive relation with fear of negative evaluation. This relation makes sense conceptually, as both shame and fear of negative evaluation are based in perceptions of evaluations of others and concern or apprehension due to these evaluations (Leary, 2004; Tangney & Dearing, 2002). The relation between shame and constructs such as fear of failure and fear of negative evaluation provide a possible explanation for the avoidance and withdraw tendencies of shame-prone individuals (Tangney, 1990; Tangney et al., 1995). Individuals prone to shame and its related experiences likely want to avoid these negative emotions, thoughts, and behaviours, resulting in withdrawing from certain behaviours. Thus, although there are many reasons why young women drop out of sport, if young women are having negative experiences in sport, either caused by or creating unpleasant emotions, thoughts, and behaviours, this may lead them to avoid sport participation. This is especially worrisome since although sport is a major source of physical activity for young people (Sport Canada, 2004), adolescent sport drop-out is already common (Telama et al., 2006). This withdraw may also be linked to fear of failure or a negative evaluation, which would come along with shame. This relation between fear, shame, and escapist tendencies is complex and perpetuating. However, the implications of these relations must be understood in order to develop a more clear understanding of young women's experiences in sport. This understanding can help us in

working towards promoting positive sport environments, keeping young women involved in sport, and encouraging lifelong participation in physical activity.

Similar to shame, characteristics of guilt also help to explain the relations found in the present study. Guilt distinguishes the self from behaviour, which protects against global devaluation of the self, as a specific instance is not generalized to the entire self (Tangney & Dearing, 2002). Thus, guilt would not be characterized with subjecting one's body to outside judgement to determine self-worth, which may help to explain the negative relations between guilt and objectified body consciousness, as well as between guilt and body shame. Objectified body consciousness and body shame both involve opinions, evaluations, or expectations of others. Objectified body consciousness involves the perception of the self as an object to be looked at and evaluated by others (Lindberg et al., 2006). Body shame, a component of objectified body consciousness, reflects an individual's shame when the body does not conform to cultural standards (Lindberg et al., 2006). Therefore, guilt may provide protection against allowing the opinions of others dictate self-worth.

Hubristic pride was expected to mirror shame's relations with the self-evaluative thoughts and behaviours, while authentic pride was expected to mirror the relations between guilt and the self-evaluative thoughts and behaviours. While some similar relations were exhibited among these emotions, both types of pride displayed more significant relations to the self-evaluative thoughts and behaviours when compared to guilt and shame. Thus, it is interesting that the "positive" emotions showed more significant relations than the "negative" emotions. This speaks to the importance of not solely focusing on the negative emotions when trying to understand the influence of emotion on cognition and behaviour when working with young

women athletes. Folkman (2008) has stressed the important functions of positive emotions in the stress process and the importance of including them in future emotion and coping research.

Both hubristic pride and shame had significant positive relations with fear of failure and fear of negative evaluation. Given that hubristic pride arises from internal, stable, uncontrollable attributions (Tracy & Robins, 2006), it makes sense theoretically that fear of failure and fear of negative evaluation exhibit a positive relation with this form of pride. Instances of failure or negative evaluations from others would be especially devastating for an individual high in hubristic pride, as outcomes are perceived as stable (Tracy & Robins, 2006). The failure or negative evaluation is not viewed as an isolated incident; rather it is seen as a downfall to the entire self.

Hubristic pride was also positively related to objectified body consciousness, body surveillance, and body shame. These relations did not mirror those found with shame. While it is surprising that shame was not also significantly related to these constructs (and, in particular, the construct of body shame), these relations with hubristic pride seem to still make sense conceptually. Hubristic pride stems from stable attributions (Tracy & Robins, 2007). Thus, pride in oneself would be contingent on continual achievement and success, and therefore it is no wonder that fear of failure, fear of negative evaluation, objectified body consciousness, body surveillance, and body shame would be relevant. As previously discussed, many young women high in hubristic pride would likely fear failure and negative evaluation, as the failure or negative evaluation would be perceived as stable – one that is constant and cannot change. Young women who believe their failures are due to a stable trait might be more prone to experiencing objectified body consciousness and the accompanying body shame and body surveillance. Avoiding failure and negative evaluation would entail meeting standards and expectations

surrounding the body and often feeling as though the self is an object to be evaluated by others (i.e., objectified body consciousness; Lindberg et al., 2006). Body shame could potentially result when these subjective standards are not met. Not wanting to fail to meet these expectations, engagement in body surveillance would be likely for young women.

Authentic pride mirrored the relations between guilt and objectified body consciousness and guilt and body shame. Authentic pride also displayed a negative relation to social physique anxiety, body surveillance, fear of failure, and fear of negative evaluation. These correlations support the adaptive nature of guilt and authentic pride for young women involved in sport, or, at the very least, the absence of the positive relations seen with shame and hubristic pride suggest that guilt and authentic pride are more adaptive than shame and hubristic pride. The internal, unstable, controllable attributions associated with authentic pride (Tracy & Robins, 2007) may provide protection against less adaptive self-evaluative thoughts and behaviours, as every variable examined in this study, with the exception of obligatory exercise and its subcomponents, was negatively associated with authentic pride. Past research has also attested to the potential benefits of authentic pride, including its positive relation to self-esteem and adaptive personality traits such as extraversion, agreeableness, conscientiousness, and emotional stability (Tracy & Robins, 2007). Thus, it appears that authentic pride, in contrast to hubristic pride, is worthwhile to promote among young women.

Self-compassion also appears to be a relevant and important construct to young women involved in sport. Adolescents' levels of self-compassion have not been previously assessed using the SCS. However, when comparing the young women in this study with previous research with undergraduate students, the adolescents showed slightly lower levels of self-compassion when compared to the undergraduate students, as discussed earlier. This is not

surprising as it has been suggested that adolescence may be a period of time when self-compassion is at its lowest (Neff, 2003b). As explained by Neff (2003b), the cognitive advances during the adolescent period, including increased introspection, metacognition, self-reflection, and social perspective taking abilities (Keating, 1990), allow adolescents to evaluate themselves and compare themselves to others as they develop their identity and social status (Brown & Lohr, 1987; Harter, 1990). Such evaluations have the tendency to be unfavourable due to the pressures faced by many adolescents in many areas of their lives in regards to issues such as academics, popularity, body image, and relationships (Simmons, Rosenberg, & Rosenberg, 1973; Steinberg, 1999). Additionally, the self-absorption often displayed by adolescents results in many young people feeling as though their experiences are unique and believing no one can understand what they are going through, contributing to decreased self-esteem, feelings of isolation, and overidentification with emotions (Neff, 2003b). Thus, "self-compassion is especially needed but especially lacking during this stage of life" (Neff, 2003b, p. 95). The self-kindness, common humanity, and mindfulness characterized with self-compassion (Neff, 2003b) could be useful resources during adolescence.

Self-compassion exhibited a significant negative relation with shame, while the relation between self-compassion and guilt was not significant. The negative relation between self-compassion and shame makes sense theoretically as the harsh, self-evaluative nature of shame (Tangney, 1990) is in direct opposition of the self-kindness component of self-compassion, which promotes kindness and understanding toward oneself in instances of pain or failure, as opposed to being self-critical (Neff, 2003b). The tendency for shame experiences to involve a generalization of a specific failure instance to the entire self (Tangney, 1990) represents an overidentification with a thought or feeling. This does not coincide with the mindfulness

component of self-compassion, which involves holding painful thoughts and feelings in a balanced awareness without overidentifying with them (Neff, 2003b). Finally, while shame is sometimes temporarily dealt with by blaming others for failure and hardship (Lewis, 1971; Scheff, 1998), it is largely focused on the self (Tangney, 1990), making it difficult to realize common humanity, which involves realizing that one's experiences are not isolated, solitary incidents, rather they are part of the larger human experience (Neff, 2003b). Due to the maladaptive potential of shame (Tracy & Robins, 2007), it is not surprising that it would accompany low levels of self-compassion, a construct with potential for well-being (Neff, 2003b).

Guilt, on the other hand, was not related to self-compassion. This finding was unexpected, as a negative relation was hypothesized because of its theorized role as a buffer against self-evaluation. However, the lack of a negative relation provides support for the contention that while self-compassion requires an absence of harsh self-criticism for failing to meet certain standards, it does not mean that one's failures or shortcomings are ignored or unrectified (Neff, 2003b). Therefore, an emotion such as guilt, which is critical for the development of moral behaviour (Hoffman, 1982a, 1982b), is still permitted and encouraged, as it is needed for optimal functioning and health (Neff, 2003b). Thus, this finding helps to quell the criticism that self-compassion leads to passivity (Neff, 2003b). Being self-compassionate provides the individual with "the emotional safety needed to see the self clearly without fear of self-condemnation, allowing the individual to more accurately perceive and rectify maladaptive patterns of thought, feeling, and behaviour" (Neff, 2003b, p. 87). Thus, self-compassionate people, including young women involved in sport, would be able to experience an adaptive emotion such as guilt when appropriate.

Due to their adaptive reputations, it was expected that guilt and authentic pride would display similar relations. However, while guilt showed no significant relation to self-compassion, authentic pride displayed a positive relation to self-compassion. Given the adaptive nature of authentic pride (Tracy & Robins, 2007), it is not surprising that it shares a relation with self-compassion. Past research has positively related authentic pride to self-esteem and adaptive personality traits such as extraversion, agreeableness, conscientiousness, and emotional stability (Tracy & Robins, 2007). The present study provides further evidence to support the adaptiveness of authentic pride. A positive relation was found between authentic pride and self-esteem, while negative relations were found between authentic pride and social physique anxiety, objectified body consciousness, body shame, body surveillance, fear of failure, and fear of negative evaluation. Thus, authentic pride appears to be an adaptive emotion, and therefore it is no surprise that it is related to self-compassion, a construct of well-being (Neff, 2003b).

When focus shifted to the less adaptive facet of pride, results showed no significant relation between hubristic pride and self-compassion. Thus, the relation between hubristic pride and self-compassion did not mirror the relation between shame and self-compassion as expected. While it makes sense that authentic pride is related to self-compassion as they share a basis in well-being and emotionally positive self-attitudes (Neff, 2003b; Tracy & Robins, 2007), the link between self-compassion and hubristic pride may be irrelevant. Hubristic pride may not be applicable in the same context as self-compassion, as pride would likely not be experienced in instances of difficulty or failure, which is when self-compassion is conceptualized as especially relevant (Neff, 2005). Hubristic pride stems from stable attributions (Tracy & Robins, 2007) and, as a result, pride in oneself would be contingent on continual achievement and success. Therefore, in times of difficulty, it would not be likely to experience hubristic pride. Also, the

narcissism associated with hubristic pride (Tracy, Cheng, Robins, & Trzesniewski, in press; Tracy & Robins, 2007) might not allow one to see personal difficulty or failure, making self-compassion less likely to occur.

The construct of self-compassion may provide for an increased understanding of the self-evaluative thoughts and behaviours, particularly those reflecting cognition for young women involved in sport. Results of this study suggest that self-compassion is negatively associated with social physique anxiety, objectified body consciousness, body shame, body surveillance, fear of failure, and fear of negative evaluation. Thus, self-compassion is inversely related to all of the self-evaluative thoughts and behaviours explored in this study, with the exception of obligatory exercise. Interestingly, obligatory exercise is the only construct in this study that includes a behavioural component. Thus, it may be that self-compassion is more related to cognitive processes, as opposed to behaviours. However, the lack of relation between obligatory exercise and self-compassion could also be due to measurement issues. The OEQ focused on aspects of exercise, including emotions related to exercise, frequency and intensity of exercise, and preoccupation with exercise. The sample was involved in sport, and therefore it may not have been able to separate out typical training tendencies of athletes from young women experiencing obligatory exercise. Nevertheless, based on these relations between self-compassion and the remainder of the self-evaluative thoughts and behaviours examined in this study, it seems self-compassion may be an important component in understanding situations involving evaluation, constructs associated with evaluation, and dealing with evaluative situations.

Self-compassion explained variance beyond self-esteem on many of the self-evaluative thoughts and behaviours explored in this study, thus focusing solely on self-esteem when

working with young women involved in sport might be missing part of the picture. Self-compassion explained variance beyond self-esteem on objectified body consciousness, body surveillance, body shame, fear of failure, and fear of negative evaluation. While no unique variance was explained on social physique anxiety or the composite or on the subdomains of obligatory exercise, which is not in line with research suggesting that self-compassion explains unique variance beyond self-esteem on social physique anxiety and obligatory exercise (Magnus & Kowalski, 2007), there is a trend for self-compassion to explain unique variance beyond self-esteem on self-evaluative thoughts and behaviours. The lack of parallel findings between the present study and the work by Magnus and Kowalski could be due to the focus on different populations (young women athletes versus young adult women, respectively); however, it was admittedly unexpected. Nevertheless, despite these contradictory results, both studies suggest that self-compassion plays a role in the experience of self-evaluative thoughts and behaviours.

There are key differences between self-compassion and self-esteem that may help to explain why self-compassion explains unique variance beyond self-esteem on the self-evaluative thoughts and behaviours in the present study. The major difference between self-compassion and self-esteem is the focus on evaluation. Self-compassion was expected to make unique contributions over and above self-esteem for the self-evaluative thoughts and behaviours explored in this study because self-compassion does not involve the self-evaluation process in a way similar to that of self-esteem (Neff, 2003b). The difference between self-compassion and self-esteem is further highlighted by Leary and MacDonald (2003), who explained that self-esteem is based on believing that the self is valued by others, whereas self-compassion is based on a motive to care for oneself. It has been contended that some benefits previously attributed to self-esteem may actually be a function of self-compassion (Leary et al., 2007). Given that self-

compassion has not been given much attention in the literature to date, the differences between self-compassion and self-esteem may have previously gone undetected (Leary et al., 2007). This is not surprising, as self-compassionate people tend to have high self-esteem (a trend also seen in this study), likely because reacting kindly as opposed to critically towards oneself promotes positive feelings about the self (Leary et al., 2007). However, the positive self-feelings experienced by self-compassionate people are void of the hubris, narcissism, or self-enhancing illusions characteristic of many people who possess high self-esteem (Leary et al., 2007).

Another possible reason why self-compassion explains variance beyond self-esteem on many self-evaluative thoughts and behaviours is linked to the differences between the two constructs on interpretation and coping with negative life events. Leary and colleagues (2007) explored the differences between individuals with low and high self-compassion and self-esteem by looking at reactions to an actual unpleasant interpersonal event. Results indicated that self-compassion was associated with lower negative emotions, while self-esteem was related to higher negative emotions (Leary et al., 2007). Thus, the difference between self-compassion and self-esteem may be linked to the process by which self-compassionate and self-esteemed people interpret and cope with negative life events (Leary et al., 2007). Self-compassion and self-esteem result in different forms of reactions to negative events, and, in many cases, the reactions elicited by self-compassion may be more adaptive than those elicited by self-esteem (Leary et al., 2007). These different reactions might explain why self-compassion explains variance beyond self-esteem on the majority of self-evaluative thoughts and behaviours examined in this study.

Despite these differences between self-compassion and self-esteem, the positive benefits of self-esteem have been acknowledged by Leary (2007). Although self-esteem was related to higher negative emotions in Leary and colleagues' (2007) study, high self-esteem was found to

help people avoid negative self-feelings. The participants who reported the most negative self-feelings were those low in both self-compassion and self-esteem. Additionally, even though there are differences between self-compassion and self-esteem, the two constructs are related. Neff (2003a) found that self-compassionate people also tend to have high self-esteem, a contention that was supported by a relation between self-compassion and self-esteem (r = .59). A similar relation was found for the young women athletes in the present study (r = .60). It is not unreasonable to assume that people who treat themselves with kindness and understanding will also likely have high self-esteem (Leary et al., 2007). Thus, the concept of self-esteem does not have to be abandoned, as it still likely serves some importance. It may be that, when combined with self-compassion, an individual is more likely to experience the positive aspects of self-esteem, but the components of self-compassion may help to counter some of the negative corollaries of self-esteem (e.g., common humanity and mindfulness might help to counter the narcissistic tendencies often associated with self-esteem (a relation shown by Raskin, Novacek, and Hogan (1991)).

Previous work has suggested that self-compassion may have potential as a buffer against negative reactions and emotions. Self-compassion has been shown to moderate reactions to real and potential failure (Neff et al., 2005) and negative emotions after receiving contradictory feedback (Leary et al., 2007). While the present study design makes it challenging to find support for a moderator hypothesis, interaction effects did explore the potential for self-compassion to act as a buffer between self-conscious emotions and the experience of self-evaluative thoughts and behaviours. Although there was weak support for the moderation hypothesis, there are some results to suggest that the exploration of self-compassion might be a useful endeavour. Some support was found for self-compassion acting as a buffer for shame.

Self-compassion showed significant interaction effects on the relation between shame and obligatory exercise, as well as the relation between shame and frequency and intensity of exercise. As mentioned previously, obligatory exercise was the only self-evaluative construct that had a distinct behavioural component captured in the measure (i.e., the OEQ), and frequency and intensity of exercise is the specific behavioural component of the OEQ. Thus, it could be that self-compassion is especially crucial in the regulation of healthy behaviour. Interaction effects revealed that as self-compassion decreases, the relation between shame and obligatory exercise, as well as the relation between shame and frequency and intensity of exercise, increases. Further examination revealed that even moderate levels of self-compassion might help to buffer the negative effects of shame on obligatory exercise and frequency and intensity of exercise. It seems that when self-compassion is low, shame may become especially problematic. No support was found for self-compassion acting as a buffer against guilt. Since self-compassion is concerned with self-kindness (Neff, 2003b), it may be more applicable for dealing with feelings of shame as they are based in the self, but not so much for guilt, which are more based in the situation (Tangney, 1990).

Previous research has already provided direction in fostering the self-compassionate perspectives. Leary et al. (2007) induced a self-compassionate perspective through writing exercises, allowing participants to acknowledge their role in negative events without feeling overwhelmed with negative emotions. Participants were instructed to write in detail about a negative event from their past. The self-compassion intervention required a written response to three prompts designed to promote thinking in a self-compassionate manner. The first section had participants list ways other people experience similar events (common humanity). The second section required participants to write a paragraph expressing understanding, kindness,

and concern to themselves in the same manner they would to a friend who was undergoing the same experiences (self-kindness). Finally, participants were asked to describe their feelings about the event in an objective and unemotional fashion (mindfulness). Similarly, Neff (n. d.) has also posted a writing exercise designed to promote self-compassion on her website. The exercise directs participants to write about an issue that makes them feel inadequate and explore, through writing, what and why they criticize and how it makes them feel. They then write about these how these feelings are sensed in the body. Finally, participants are instructed to write a compassionate letter to themselves from the perspective of an imaginary friend. While these writing exercises have potential for coaches, mental skills consultants, and other individuals working with athletes, future research needs to explore how effective they are for young women in sport coping with self-conscious emotions.

CHAPTER 4

4.1 SUMMARY AND CONCLUSIONS

In conclusion, this study suggests that self-conscious emotions are relevant in the lives of young women involved in sport. Shame appears to be less adaptive than guilt, as shame was positively associated with emotional element of exercise, preoccupation with exercise, fear of failure, and fear of negative evaluation. Guilt, on the other hand, was negatively related to objectified body consciousness and body shame. Pride also seems to have a similar distinction in adaptiveness. Authentic pride seems to be more adaptive than hubristic pride, as the former exhibited negative relations with social physique anxiety, objectified body consciousness, body surveillance, body shame, fear of failure, and fear of negative evaluation. Hubristic pride showed positive relations with objectified body consciousness, body surveillance, body shame, fear of failure, and fear of negative evaluation.

Additionally, the present study suggests that self-compassion is a potentially important construct for young women involved in sport. Self-compassion showed an inverse relation to social physique anxiety, objectified body consciousness, body surveillance, body shame, fear of failure, and fear of negative evaluation. The negative associations suggest self-compassion may be a worthwhile construct to develop as it may provide protection against some negative emotions and self-evaluative thoughts and behaviours. In addition, self-compassion explained

unique variance beyond self-esteem on objectified body consciousness, body surveillance, body shame, fear of failure, and fear of negative evaluation, suggesting that the current focus on self-esteem may be capturing only part of the picture as we strive to understand young women's emotional experiences in sport. Also, self-compassion showed significant interaction effects on the relations between shame and obligatory exercise and shame and frequency and intensity of exercise, suggesting self-compassion may have some potential to buffer the negative relations between shame and obligatory exercise and shame and frequency and intensity of exercise.

4.2 STRENGTHS AND LIMITATIONS

The present study has several strengths, including its basis in current self-conscious emotion theory, the application of this theory to young women involved in sport, and the potential generalizability of the results. The direction of the present study was rooted in self-conscious emotion theory (Tracy & Robins, 2004), which provided rationale and the self-evaluative link for each of the constructs examined in this study. Self-conscious emotion theory was applied to young women involved in sport – a population to which self-evaluation is very pertinent. Exploring the relation between the self-conscious emotions and self-evaluative thoughts and behaviours takes us another step forward towards a more clear understanding of young women's emotional experiences in sport. Additionally, young women athletes from both rural and urban schools and from a variety of sports and sport backgrounds participated in this study, enhancing the potential generalizability of results.

The inclusion of both rural and urban schools promotes inclusiveness and an opportunity for more young women to become involved in the research and the mental skills training session. Whether the offer of the mental skills training session attracted more participation is unknown; however, it did appear anecdotally to increase enthusiasm about the study among administrators,

coaches, and athletes. The mental skills training session was an opportunity to work with the coaches and athletes at each school with the goal of helping them to develop skills and put into place plans to help them reach their goals. For future students looking to conduct research in the school system, showing respect and interest in the school and program outside of the constraints of your study will help to maintain and promote positive collaborations not only for yourself, but for future researchers.

Despite these strengths and contributions, no study is without limitations. One of the main limitations of this study relates to testing for interaction effects using cross-sectional data. A challenge in research is that it is often difficult to adequately explore interaction effects in observational designs because of the joint distribution of correlates and because it is often ordinal interactions that emerge in observational studies (Cohen, Cohen, West, & Aiken, 2003). It is also possible that other significant interactions effects could have gone undetected due to the study design. Measurement error, the functional form of the interaction, and a lack of statistical power can make interaction effects difficult to detect (Jaccard, Wan, & Turrisi, 1990; McClelland & Judd, 1993). It is difficult to specify to what extent a certain factor contributes to a failure to detect an expected significant interaction (Jaccard et al., 1990). While these variables were taken into account in designing the present study (e.g., power calculations determined the minimum number of participants required and that number was attained), they may still have been an issue. Also, even though two significant interactions were found, there is a concern over Type I error due to the number of interaction analyses that were conducted ($N = 20$).

Another limitation of this research is the inability to determine a causal relation among the variables in this study due to the correlational, cross-sectional design of the study. While correlation and regression analysis were performed as necessary first steps to explore the

relevance of self-compassion to young women athletes, the results only show that self-compassion is related to, not the cause of, decreased social physique anxiety, objectified body consciousness, body surveillance, body shame, fear of failure, and fear of negative evaluation in this population. The same reasoning applies to the relations between the self-conscious emotions and self-evaluative thoughts and behaviours, as well as with the relations between self-compassion and the self-conscious emotions. No causal relations can be determined from the current study. Identifying a cause-and-effect relation among self-compassion and other variables in this study using longitudinal and experimental study designs would provide further evidence that self-compassion is separate and perhaps more positive than self-esteem and provide a stronger foundation for intervention work. Nonetheless, research to identify correlates is useful both from a practical and from a theoretical perspective. Practically, correlational studies can help to generate sound hypotheses about possible causal relations and can set a useful foundation for future intervention work, as it helps to identify potential moderator variables to be targeted (Bauman, Sallis, Dzewaltowski, & Owen, 2002). From a theoretical perspective, correlational studies also test predictions derived from theory. Results could lead to further support of theory, or, conversely, lead to necessary modifications to theory (Bauman et al., 2002). Nonetheless, although correlational, this study provides a basis from which to design future research strategies.

Another limitation is that the OEQ was designed to assess obligatory exercise; however, it may not have been specific enough for a group with a structured physical training program such as athletes. Hence, the OEQ (in particular the OEQ frequency and intensity of exercise subscale) might not have been sensitive enough to distinguish between exercise that is adaptive and necessary for many athletes and exercise that becomes obligatory. For example, a high score

on the item "I exercise more than three days per week" would not be especially problematic for most athletes, or the general population for that matter. This issue may be why the frequency and intensity subscale appeared more adaptive than the emotional element of exercise subscale and the preoccupation with exercise subscale. However, looking at the measure and subscales as a whole, as well as independently, provided useful information about obligatory exercise as measured in the present study, as well as its relation with shame, guilt, authentic pride, hubristic pride, and self-compassion.

While looking at both the composite and the subscales of a measure can provide useful details, care must be taken when interpreting the results. It may be, when looking at the composite results, that the subscale is driving the result. For example, significant negative relations were found between guilt and objectified body consciousness and guilt and body shame. Recall that body shame is a subdomain of objectified body consciousness. It is likely that body shame is the major influence in the significant negative relation between guilt and objectified body consciousness. Similar logic goes for the significant interaction effects of self-compassion on the relation between shame and obligatory exercise and shame and frequency and intensity of exercise. The frequency and intensity subdomain of the obligatory exercise composite is likely driving the significant interaction effect on shame and obligatory exercise. These factors need to be considered when interpreting results, as they provide important information as to which aspects of each construct seem to be most relevant. For the young women athletes in this study, body shame appears to be a major driving force in the significant results for the objectified body consciousness composite. This logic cannot be applied as simply to obligatory exercise, because the composite of the measure consists of more than just the

subscales. Therefore, it is not as easy to see which subscales are likely driving the result of the composite.

The length of the questionnaire might have created participant burden, which is another potential limitation in this study. However, I made choices in the study design to try to limit participant burden and obtain a high quality data set. First, self-conscious emotion and self-compassion measures, measures used across a number of analyses, were placed at the start of the questionnaire so that they were filled out early in the process. The measures at the end of the questionnaire were shorter and thus quicker to complete. Second, shorter versions of scales, with adequate psychometric support, were used when possible (i.e., the short-form of the Performance Failure Appraisal Inventory [PFAI-S]). Third, although the questionnaire was still fairly lengthy, only a subset of possible self-evaluative thoughts and behaviours were included in the present study. Thus, it is important to keep in mind that only five general self-evaluative thoughts and behaviours were explored in this study – a grouping which is by no means exhaustive.

4.3 RECOMMENDATIONS FOR FUTURE RESEARCH

Future research may want to explore self-compassion, in the context of other study variables, longitudinally. This would provide further insight into self-compassion as a moderator for the relation between the self-conscious emotions and self-evaluative thoughts and behaviours over time. Additionally, it would also provide information about the changeability and stability of self-compassion over time. These tasks will provide the necessary information to take self-compassion research to a more applied level and create an intervention program designed to help coaches, parents, and teachers include and promote self-compassion as part of the sport experience to ensure a positive, emotionally healthy experience for all young women involved

sport, not just those at the elite level. The goal would be to provide young women with resources and strategies to help with the management of negative emotions, such as guilt and shame.

Another potential direction for future research is to look at young women's experiences of self-conscious emotions in specific situations. The present study explored *proneness* to guilt and shame. It also examined authentic and hubristic pride in terms of *trait*, as opposed to state, pride. Looking at self-conscious emotions in particular situations could highlight potentially problematic situations for young women athletes. From a mental skills consulting perspective, focus planning could help an athlete to deal with these situations. Additionally, the identification of situations that promote the experience of self-conscious emotions would highlight areas where self-compassion might be especially relevant and useful.

Future research may also want to explore the relations among self-conscious emotions, self-compassion, and the self-evaluative thoughts and behaviours with particular emphasis on type of sport (e.g., team sport, individual sport, sports in which the body is on display) and level of sport (e.g., local, provincial, regional, national, international). Self-presentation research has suggested that sports that are considered "feminine" (i.e., cheerleading/dance team, swimming) are more likely to encourage behaviours that reinforce ideals surrounding appearance and beauty than other sports such as hockey, basketball, and soccer (Crissey & Honea, 2006). Young women in high school who participate in stereotypically feminine sports have been found to be more likely to report feeling overweight, attempt to lose weight, and use multiple weight-loss strategies compared to non-athletes (Crissey & Honea, 2006). Other researchers have found a relation between eating disorders and poor body image for women participating in "lean" sports such as cross-country and gymnastics, where thinness and appearance are perhaps more of a focus than in other sports (Parsons & Betz, 2001; Smolak, Murnen, & Ruble, 2000). Therefore,

the type of sport may be a key variable to consider when seeking to understand young women's experiences in sport. Information of type and level of sport was collected in this study for descriptive purposes, but future research might look into it further to sort out the differences and relations among the self-conscious emotions, self-compassion, and self-evaluative thoughts and behaviours among different sports and levels of competition. One challenge in doing such an analysis within the context of the present study, in addition to lack of power, is that the majority of young women participated in a number of different sports at a variety of levels. Exploring questions surrounding the impact of type and level of sport would likely require a participant selection process different from the one used in the present study.

4.4 IMPLICATIONS

Emotion is inevitable and it is never the intent to eliminate an emotion, rather to have them function in the most adaptive manner possible. One does not want to get caught in a perpetual maladaptive emotional state, which can happen with the self-conscious emotions. If we feel bad about ourselves or negatively evaluate ourselves, the resulting emotion is shame (Tangney, 1990). The present study suggests that if we are shame-prone, we are more likely to exhibit the emotional element component of obligatory exercise, be preoccupied with exercise, and experience fear of failure and fear of negative evaluation. In addition, conceptually it makes sense to infer that the self-evaluation surrounding these emotions and constructs may prompt other self-evaluative thoughts and behaviours (e.g., social physique anxiety, objectified body consciousness, etc). Experiences like fear of failure and fear of negative evaluation likely comes with more self-evaluation and shame. Additionally, shame can change self-perceptions, causing feelings of worthlessness and powerlessness (Tangney, 1990), which likely makes for more negative self-evaluation. Even the resulting escapist behaviours for dealing with shame

(Tangney et al., 1995) likely leads to more negative self-evaluation. This fosters a continuance of the cycle unless we find a way to make self-evaluation more positive or less of an issue – which is where self-compassion can be an asset. Self-compassion can help to keep emotions in a balanced awareness, but prevents overidentification (Neff, 2003b), lessening the risk of getting into a perpetual cycle. Sport provides a potential context where self-compassion could be both developed and applied. The evaluation, standards and expectations they experience in their lives and in sport have the potential to keep promoting it. As busy young women who are often involved in a multitude of activities, the standards and expectations seem to just keep getting higher and are not likely to cease. Thus, it is necessary to give these young women an effective way to deal with them. Developing self-compassion through sport might be one way to not only create a healthy sport environment that promotes involvement throughout the lifespan, but also help develop a skill set useful in various aspects of their lives.

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APPENDICES

APPENDIX A

Test of Self-Conscious Affect for Adolescents (TOSCA-A)

On the following pages, you will find descriptions of a variety of situations. After each situation, you will see several statements about different ways that people might think or feel. As you read each situation, really imagine that you are in that situation now. Imagine how you might think or feel. After reading each statement, please indicate which how likely it is that the statement would be true for you. ***Please check one response per statement.***

There are no right or wrong answers to these questions. **We're simply interested in your thoughts and ideas about these situations.**

Example. You wake up early one morning on a school day.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would eat breakfast right away.	☐	✓	☐	☐	☐
b) I would wonder why I woke up so early.	☐	☐	☐	☐	☐
1. You trip in the cafeteria and you spill your friend's drink.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would be thinking that everyone is watching me and laughing.	☐	☐	☐	☐	☐
b) I would feel very sorry. I should have watched where I was going.	☐	☐	☐	☐	✓
2. For several days you put off talking to a teacher about a missed assignment. At the last minute you talk to the teacher about it, and all goes well.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would think: "I guess I'm more convincing than I thought.	☐	☐	☐	☐	☐
b) I would regret that I put it off.	☐	☐	☐	☐	☐
c) I would feel like a coward.	☐	☐	☐	☐	☐
d) I would think: "I handled that well."	☐	☐	☐	☐	☐
3. While playing around, you throw a ball and it hits your friend in the face.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would feel stupid that I can't even throw a ball.	☐	☐	☐	☐	☐
b) I would apologize and make sure my friend feels better.	☐	☐	☐	☐	☐
4. You and a group of classmates worked very hard on a project. Your teacher singles you out for a better grade than anyone else.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would feel alone and apart from my classmates.	☐	☐	☐	☐	☐
b) I would feel that my hard work had paid off.	☐	☐	☐	☐	☐
c) I would feel competent and proud of myself.	☐	☐	☐	☐	☐
d) I would tell the teacher that everyone should get the same grade.	☐	☐	☐	☐	☐

5. You break something at a friend's house and then hide it.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would think: "This is making me anxious. I need to either fix it or replace it."	□	□	□	□	□
b) I would avoid seeing that friend for awhile.	□	□	□	□	□
6. At school, you wait until the last minute to plan a project, and it turns out badly.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would feel useless and incompetent.	□	□	□	□	□
b) I would feel that I deserve a bad grade.	□	□	□	□	□
7. You wake up one morning and remember it's your mother's birthday. You forgot to get her something.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would think: "After everything she's done for me, how could I forget her birthday?"	□	□	□	□	□
b) I feel irresponsible and thoughtless.	□	□	□	□	□
8. You walk out of a test thinking you did extremely well. Then you find out you did poorly.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would feel that I should have done better. I should have studied more.	□	□	□	□	□
b) I would feel stupid.	□	□	□	□	□
9. You make a mistake at school and find out a classmate is blamed for the error.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would keep quiet and avoid the classmate.	□	□	□	□	□
b) I would feel unhappy and eager to correct the situation.	□	□	□	□	□
10. You were talking in class, and your friend got blamed. You go to the teacher and tell him the truth.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would feel like I always get people in trouble.	□	□	□	□	□
b) I would feel good about setting the record straight.	□	□	□	□	□
c) I would be proud of myself for being an honest person.	□	□	□	□	□
d) I would think: "I'm the one who should get in trouble. I shouldn't have been talking in the first place."	□	□	□	□	□

11.You and your friend are talking in class, and you get in trouble.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would think: "I should know better. I deserve to get in trouble."	□	□	□	□	□
b) I would feel like everyone in the class was looking at me and they were about to laugh.	□	□	□	□	□
12. You make plans to meet a friend. Later you realize you stood your friend up.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would think: "I'm inconsiderate."	□	□	□	□	□
b) I would try to make it up to my friend as soon as possible.	□	□	□	□	□
c) I would think: "Someone distracted me just before I was supposed to meet my friend."	□	□	□	□	□
13. You volunteer to help raise money for a good cause. Later you want to quit, but you know your help is important.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would feel selfish, and I'd think I am basically lazy.	□	□	□	□	□
b) I would think: "I should be more concerned about doing whatever I can to help."	□	□	□	□	□
c) I would feel great that I had helped.	□	□	□	□	□
d) I would feel very satisfied with myself.	□	□	□	□	□
14. Your report card isn't as good as you wanted. You show it to your parents when you get home.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) Now that I got a bad report card, I would feel worthless.	□	□	□	□	□
b) I would think: "I should listen to everything the teachers says and study harder."	□	□	□	□	□
15. You have recently moved to a new school, and everyone has been very helpful. A few times you had to ask some big favors, but you returned the favors as soon as you could.	not at all likely	unlikely	maybe (half & half)	likely	very likely
a) I would feel like a failure.	□	□	□	□	□
b) I would be especially nice to the people who had helped me.	□	□	□	□	□
c) I would think: "I am smart to ask for help when I need it."	□	□	□	□	□
d) I would be proud that I returned the favors.	□	□	□	□	□

APPENDIX B

Authentic and Hubristic Pride Scales

Below are a number of words and phrases that describe different feelings and emotions. Read each item and then indicate the extent to which you generally feel this way (i.e., how you feel on average) using the scale shown below. *Check one response per word/phrase.*

	Not at all	Somewhat	Moderately	Very Much	Extremely
accomplished	□	□	□	□	□
arrogant	□	□	□	□	□
conceited	□	□	□	□	□
confident	□	□	□	□	□
egotistical	□	□	□	□	□
fulfilled	□	□	□	□	□
productive	□	□	□	□	□
like I am achieving	□	□	□	□	□
like I have self-worth	□	□	□	□	□
pompous	□	□	□	□	□
smug	□	□	□	□	□
snobbish	□	□	□	□	□
stuck-up	□	□	□	□	□
successful	□	□	□	□	□

APPENDIX C

Self-Compassion Scale (SCS)

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the right of each item, *write a number between 1 to 5* to indicate how often you behave in the stated manner, using the following scale:

Almost never				Almost always
1	2	3	4	5

1. I'm disapproving and judgmental about my own flaws and inadequacies.	
2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.	
3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.	
4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.	
5. I try to be loving towards myself when I'm feeling emotional pain.	
6. When I fail at something important to me I become consumed by feelings of inadequacy.	
7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.	
8. When times are really difficult, I tend to be tough on myself.	
9. When something upsets me I try to keep my emotions in balance.	
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.	
11. I'm intolerant and impatient towards those aspects of my personality I don't like.	
12. When I'm going through a very hard time, I give myself the caring and tenderness I need.	
13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.	
14. When something painful happens I try to take a balanced view of the situation.	
15. I try to see my failings as part of the human condition.	

Continued on the next page ⇨

Almost never				Almost always
1	2	3	4	5

16. When I see aspects of myself that I don’t like, I get down on myself.	
17. When I fail at something important to me I try to keep things in perspective.	
18. When I’m really struggling, I tend to feel like other people must be having an easier time of it.	
19. I’m kind to myself when I’m experiencing suffering.	
20. When something upsets me I get carried away with my feelings.	
21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.	
22. When I'm feeling down I try to approach my feelings with curiosity and openness.	
23. I’m tolerant of my own flaws and inadequacies.	
24. When something painful happens I tend to blow the incident out of proportion.	
25. When I fail at something that's important to me, I tend to feel alone in my failure.	
26. I try to be understanding and patient towards those aspects of my personality I don't like.	

APPENDIX D

Rosenberg Self-Esteem Scale (RSES)

Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle **SA**. If you agree with the statement, circle **A**. If you disagree, circle **D**. If you strongly disagree, circle **SD**.

1. On the whole, I am satisfied with myself.	***SA***	***A***	***D***	***SD***
2. At times, I think I am no good at all.	***SA***	***A***	***D***	***SD***
3. I feel that I have a number of good qualities.	***SA***	***A***	***D***	***SD***
4. I am able to do things as well as most other people.	***SA***	***A***	***D***	***SD***
5. I feel I do not have much to be proud of.	***SA***	***A***	***D***	***SD***
6. I certainly feel useless at times.	***SA***	***A***	***D***	***SD***
7. I feel that I'm a person of worth, at least on an equal plane with others.	***SA***	***A***	***D***	***SD***
8. I wish I could have more respect for myself.	***SA***	***A***	***D***	***SD***
9. All in all, I am inclined to feel that I am a failure.	***SA***	***A***	***D***	***SD***
10. I take a positive attitude toward myself.	***SA***	***A***	***D***	***SD***

APPENDIX E

Social Physique Anxiety Scale (SPAS)

For each item, please indicate the degree to which the statement is characteristic or true of you. *Circle <u>one</u> response per statement*.

1	2	3	4	5
Not at all characteristic of me	**Slightly characteristic of me**	**Moderately characteristic of me**	**Very characteristic of me**	**Extremely characteristic of me**

1. I wish I wasn't so uptight about my physique/figure.
   1 2 3 4 5

2. There are times when I'm bothered by thoughts that other people are evaluating my weight or muscular development negatively.
   1 2 3 4 5

3. Unattractive features of my physique/figure make me nervous in certain social settings.
   1 2 3 4 5

4. In the presence of others, I feel apprehensive about my physique/figure.
   1 2 3 4 5

5. I am comfortable with how fit my body appears to others.
   1 2 3 4 5

6. It would make me uncomfortable to know others were evaluating my physique/figure.
   1 2 3 4 5

7. When it comes to displaying my physique/figure to others, I am a shy person.
   1 2 3 4 5

8. I usually feel relaxed when it is obvious that others are looking at my physique/figure.
   1 2 3 4 5

9. When in a bathing suit, I often feel nervous about the shape of my body.
   1 2 3 4 5

APPENDIX F

Obligatory Exercise Questionnaire (OEQ)

Listed below are a series of statements about people's exercise habits. Please circle the number that reflects HOW OFTEN you could make the following statements. *Circle one response per statement*.

***Note:** Exercise includes your physical sport training.

1 – NEVER 2 – SOMETIMES 3 – USUALLY 4 – ALWAYS

1. I engage in physical exercise on a daily basis.	1	2	3	4
2. I engage in one/more of the following forms of exercise: walking, jogging/running or weightlifting.	1	2	3	4
3. I exercise more than three days per week.	1	2	3	4
4. When I don't exercise I feel guilty.	1	2	3	4
5. I sometimes feel like I don't want to exercise, but I go ahead and push myself anyway.	1	2	3	4
6. My best friend likes to exercise.	1	2	3	4
7. When I miss an exercise session, I feel concerned about my body possibly getting out of shape.	1	2	3	4
8. If I have planned to exercise at a particular time and something unexpected comes up (like an old friend comes to visit or I have some work to do that needs immediate attention) I will usually skip my exercise for that day.	1	2	3	4
9. If I miss a planned workout, I attempt to make up for it the next day.	1	2	3	4
10. I may miss a day of exercise for no good reason.	1	2	3	4
11. Sometimes, I feel a need to exercise twice in one day, even though I may feel a little tired.	1	2	3	4
12. If I feel I have overeaten, I will try to make up for it by increasing the amount I exercise.	1	2	3	4
13. When I miss a scheduled exercise session I may feel tense, irritable or depressed.	1	2	3	4

14. Sometimes, I find that my mind wanders to thoughts about exercising.	1	2	3	4
15. I have had daydreams about exercising.	1	2	3	4
16. I keep a record of my exercise performance, such as how long I work out, how far or fast I run.	1	2	3	4
17. I have experienced a feeling of euphoria or a “high” during or after an exercise session.	1	2	3	4
18. I frequently “push myself to the limits.”	1	2	3	4
19. I have exercised when advised against such activity (i.e. by a doctor, friend, etc.)	1	2	3	4
20. I will engage in other forms of exercise if I am unable to engage in my usual form of exercise.	1	2	3	4

APPENDIX G

Objectified Body Conscious – Youth (OBC-Youth)

Please indicate your agreement with each item on a 7-point scale: ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). *Check <u>one</u> response per statement.*

	1 Strongly disagree	2	3	4	5	6	7 Strongly agree
1. I often compare how I look with how other people look.	□	□	□	□	□	□	□
2. During the day, I think about how I look many times.	□	□	□	□	□	□	□
3. I often worry about whether the clothes I am wearing make me look good.	□	□	□	□	□	□	□
4. I often worry about how I look to other people.	□	□	□	□	□	□	□
5. I feel ashamed of myself when I haven't made an effort to look my best.	□	□	□	□	□	□	□
6. I feel like I must be a bad person when I don't look as good as I could.	□	□	□	□	□	□	□
7. I would be ashamed for people to know what I really weigh.	□	□	□	□	□	□	□
8. When I'm not exercising enough, I question whether I am a good person.	□	□	□	□	□	□	□
9. When I'm not the size I think I should be, I feel ashamed.	□	□	□	□	□	□	□
10. I think I am pretty much stuck with the looks I was born with.	□	□	□	□	□	□	□
11. I think I could look as good as I wanted to if I worked at it.	□	□	□	□	□	□	□
12. I really don't think I have much control over how my body looks.	□	□	□	□	□	□	□
13. I think my weight is mostly determined by the genes I was born with.	□	□	□	□	□	□	□
14. I can weigh what I'm supposed to if I try hard enough.	□	□	□	□	□	□	□

APPENDIX H

Performance Failure Appraisal Inventory – Short Form (PFAI-S)

Please answer the following questions using the response format shown (*check one response per question*):

	-2 **Do Not Believe At All**	**-1**	**0** **Believe 50% of the Time**	**+1**	**+2** **Believe 100% of the Time**
1. When I am failing, I am afraid that I might not have enough talent.	☐	☐	☐	☐	☐
2. When I am failing, it upsets my "plan" for the future.	☐	☐	☐	☐	☐
3. When I am not succeeding, people are less interested in me.	☐	☐	☐	☐	☐
4. When I am failing, important others are disappointed.	☐	☐	☐	☐	☐
5. When I am failing, I worry about what others think about me.	☐	☐	☐	☐	☐

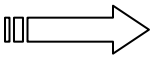
APPENDIX I

Fear of Negative Evaluation Scale (FNE)

Read each of the following statements carefully and indicate how characteristic it is of you according to the following scale:

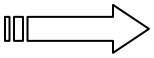
1	2	3	4	5
Not at all characteristic of me	**Slightly characteristic of me**	**Moderately characteristic of me**	**Very characteristic of me**	**Extremely characteristic of me**

1. **I worry about what others will think of me even when I know it doesn't make any sense.**



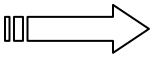
1 2 3 4 5

2. **It bothers me when people form unfavourable impression of me.**



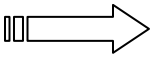
1 2 3 4 5

3. **I am frequently afraid of other people noticing my shortcomings.**



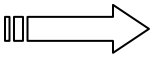
1 2 3 4 5

4. **I worry about what kind of impression I make on people.**



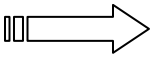
1 2 3 4 5

5. **I am afraid that others will not approve of me.**



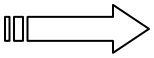
1 2 3 4 5

6. **I am afraid that people will find fault with me.**



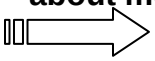
1 2 3 4 5

7. **I am concerned about other people's opinions of me.**



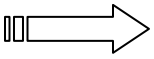
1 2 3 4 5

8. **When I am talking to someone, I worry about what they may be thinking about me.**



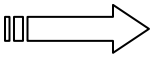
1 2 3 4 5

9. **I am usually worried about what kind of impression I make.**



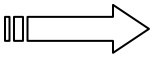
1 2 3 4 5

10. **If I know someone is judging me, it tends to bother me.**



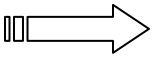
1 2 3 4 5

11. **Sometimes I think I am too concerned with what other people think of me.**



1 2 3 4 5

12. **I often worry that I will say or do the wrong things.**



1 2 3 4 5

APPENDIX J

General Demographics Questionnaire

Gender: _____ **Age: _____**

Height: _____ **Weight: _____**

Date of Birth (month/date/year): _____

Have you had your first menstruation (circle one)? Yes or No
If yes, what was the month and year of 1st menstrual period? Month _____ Year _____

Sociocultural Information:

How would you describe yourself? You may mark more than one or specify, if applicable.

___ Aboriginal
___ Arab
___ Black
___ Chinese
___ Filipino
___ Japanese
___ Korean
___ Latin American
___ South Asian *(e.g., East Indian, Pakistani, Sri Lankan, etc.)*
___ Southeast Asian *(e.g., Vietnamese, Cambodian, Malaysian, Laotian, etc.)*
___ West Asian *(e.g., Iranian, Afghan, etc.)*
___ White
___ Other - *Specify* _____

Parental education level (check highest one attained):

Father	**Mother**	
☐	☐	did not finish high school
☐	☐	graduated from high school
☐	☐	some education after high school
☐	☐	graduated from college
☐	☐	I'm not sure

APPENDIX K

Current Sport Participation Questionnaire

Sport Involvement and Competition Level

Please indicate the levels of sport competition you have competed at **IN THE LAST 12 MONTHS**. *Also indicate the sport(s) that each level is applicable to (i.e., what sport(s) you competed in at each level).*

High school sport:

	Level	Sport(s)
	Recreational (competing in intermurals or in a recreational league)	
	Local (competing against athletes from your city/town)	
	Provincial (competing against athletes from around the province of Saskatchewan)	
	Regional (competing against athletes from the western provinces (BC, AB, SK, MB))	

Club/community sport:

	Level	Sport(s)
	Recreational (competing in intermurals or in a recreational league)	
	Local (competing against athletes from your city/town)	
	Provincial (competing against athletes from around the province of Saskatchewan)	
	Regional (competing against athletes from the western provinces (BC, AB, SK, MB))	
	National (competing at a National Championship)	
	International I (competing against athletes from a country other than Canada)	
	International II (member of a national team (i.e. representing/represented Canada))	

During the PAST WEEK, how many times did you play an active sport, such as baseball, softball, basketball, soccer, swimming, or football? (*circle one*)

0 **1** **2** **3**

not at all ***5 or more times***

APPENDIX L

Copy of Ethical Approval

UNIVERSITY OF SASKATCHEWAN

Behavioural Research Ethics Board (Beh-REB)

Certificate of Approval

PRINCIPAL INVESTIGATOR	DEPARTMENT	BEH#
Kent C. Kowalski	Kinesiology	07-181

INSTITUTION(S) WHERE RESEARCH WILL BE CONDUCTED (STUDY SITE)
University of Saskatchewan
Saskatoon SK

STUDENT RESEARCHERS
Amber Mosewich

SPONSOR
SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL OF CANADA (SSHRC)

TITLE
Adolescent women athletes' sport experiences: Self-conscious emotions and self-evaluative thoughts and behaviours

APPROVAL DATE	EXPIRY DATE	APPROVAL OF:
04-Sep-2007	03-Sep-2008	Application Recruitment Letter Participant Assent Form Parental Consent Form Application to Conduct Research Form Questionnaire Package

CERTIFICATION
The University of Saskatchewan Behavioural Research Ethics Board has reviewed the above-named research project. The proposal was found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS
In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for further instructions: *http://www.usask.ca/research/ethical.shtml*

John Rigby, Chair
University of Saskatchewan
Behavioural Research Ethics Board

Signature Date 6 Sept 6/07

Please send all correspondence to:

Ethics Office
University of Saskatchewan
Room 306 Kirk Hall, 117 Science Place
Saskatoon SK S7N 5C8
Telephone: (306) 966-2084 Fax: (306) 966-2069

UNIVERSITY OF SASKATCHEWAN

Behavioural Research Ethics Board (Beh-REB)

Certificate of Approval

PRINCIPAL INVESTIGATOR	DEPARTMENT	Beh #
Kent C. Kowalski	Kinesiology	07-181

INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT
University of Saskatchewan
Saskatoon SK

STUDENT RESEARCHER(S)
Amber Mosewich

SPONSORING AGENCIES
SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL OF CANADA (SSHRC)

TITLE
Adolescent women athletes' sport experiences: Self-conscious emotions and self-evaluative thoughts and behaviours

APPROVAL DATE	EXPIRY DATE
04-Sep-2007	03-Sep-2008

APPROVAL OF
Revised Questionnaire

APPROVED ON

CERTIFICATION
The University of Saskatchewan Behavioural Research Ethics Board has reviewed the proposed revisions to your study. The revisions were found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

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ONGOING REVIEW REQUIREMENTS
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John Rigby

John Rigby, Chair
University of Saskatchewan
Behavioural Research Ethics Board

Oct 12/07
Signature Date

Please send all correspondence to:
Ethics Office
University of Saskatchewan
Room 306 Kirk Hall, 117 Science Place
Saskatoon SK S7N 5C8
Telephone: (306) 966-2084 Fax: (306) 966-2069

UNIVERSITY OF SASKATCHEWAN

Behavioural Research Ethics Board (Beh-REB)

Certificate of Approval

PRINCIPAL INVESTIGATOR	DEPARTMENT	Beh #
Kent C. Kowalski	Kinesiology	07-181

INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT
University of Saskatchewan
Saskatoon SK

STUDENT RESEARCHER(S)
Amber Mosewich

SPONSORING AGENCIES
SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL OF CANADA (SSHRC)

TITLE
Adolescent women athletes' sport experiences: Self-conscious emotions and self-evaluative thoughts and behaviours

APPROVAL DATE	EXPIRY DATE
04-Sep-2007	03-Sep-2008

APPROVAL OF	APPROVED ON
Revised Participant Pool	19-Nov-2007

CERTIFICATION
The University of Saskatchewan Behavioural Research Ethics Board has reviewed the proposed revisions to your study. The revisions were found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS
In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for further instructions: http://www.usask.ca/research/ethics_review/

John Rigby

John Rigby, Chair
University of Saskatchewan
Behavioural Research Ethics Board

Nov 19/07
Signature Date

Please send all correspondence to:
Ethics Office
University of Saskatchewan
Room 306 Kirk Hall, 117 Science Place
Saskatoon SK S7N 5C8
Telephone: (306) 966-2084 Fax: (306) 966-2069

APPENDIX M

School Board Approvals

GREATER SASKATOON CATHOLIC SCHOOLS

Research Approval, Summary and Request for Participation

GREATER SASKATOON CATHOLIC SCHOOLS

DATE: September 28, 2007

TO: Amber Mosewich – researcher
Johnny Marciniuk – Physical Education Coordinator 659-7075 jmarciniuk@scs.sk.ca
School Principals at BJM, EDF and Holy Cross
Lori Garchinski, Carla Puetz-Aaro, Elaina Guilmette

TOPIC: **Adolescent Women Athletes' Sport Experience**

FROM: Brendan Bitz – Superintendent of Education 659-7040 bbitz@scs.sk.ca

RE: External Research Approval and Summary

Please consider this letter of response a confirmation of your official approval to conduct school based research in Greater Saskatoon Catholic Schools. I will serve as your primary contact should you have any questions. Johnny Marciniuk will serve as your coordinator contact. I wish you every success in your research and would appreciate a copy of your findings upon completion of this research.

The following summary is being forwarded to principals and/or teachers for consideration as participants.

- Ethics approval was granted by the University of Saskatchewan on September 4, 2007.
- Principals, the teachers listed above have been informally invited to participate and have all registered their interest. Their participation is voluntary.
- Please direct questions concerning this research to the researcher.
- Funding for this research has been provided by a SSHRC Grant.
- Please call me at 659-7040 to clarify or discuss a concern. Your consideration of this request and circulation of the study to your teachers is appreciated.

Contact:	Amber Mosewich Researcher	966-1123 Work	Dr. Kent Kowalski Advisor
	Adm693@mail.usask.ca E-mail	September, 2007 Start Date	June, 2008 End Date

Purpose: The purpose of this study is to learn about adolescent women athletes' experiences in sport by exploring the relationship between the emotions and various self-evaluative thoughts and behaviours.

Target: All Grade 9-12 female participants on school athletic teams. Each participant will be asked to complete a 20 to 30 minute questionnaire.

- All responses are confidential. Participation is voluntary.

Attached: Research Summary Letter

Saskatoon Public Schools
Caring to Learn...Learning to Care

310 - 21st Street East, Saskatoon, Saskatchewan S7K 1M7
Tel: (306) 683-8200 • Fax: (306) 657-3900
www.spsd.sk.ca
Dr. Jim Jutras, Director of Education

October 1, 2007

AMBER MOSEWICH
UNIVERSITY OF SASKATCHEWAN
COLLEGE OF KINESIOLOGY
87 CAMPUS DRIVE
SASKATOON SK S7M 5B2

Dear Amber:

I have received and approved your request to conduct research in Saskatoon Public Schools. Your study entitled *"Adolescent Women Athletes' Sport Experiences: Self-Conscious Emotions and Self-Evaluative Thoughts and Behaviours"* promises to provide interesting and relevant information.

Please contact Mr. Basil Hughton, Principal at Aden Bowman Collegiate, Mr. Cole Kirby, Principal at Marion Graham Collegiate and Mr. Brian Flaherty, Principal at Bedford Road Collegiate, directly and provide them with the written details of your study, a copy of the interview questions and a copy of this letter when seeking permission to conduct research in that particular school.

Our staff voluntarily participate in research and are free to withdraw from the research at any time.

Upon completion of your research, we request that you submit a copy of your study to our office. Best wishes for success with your research.

Yours truly,

Dr. Scott Tunison
Coordinator: Research and Measurement
ST:ndw

Copies to:
Mr. Basil Hughton, Aden Bowman – Principal
Mr. Cole Kirby, Marion Graham – Principal
Mr. Brian Flaherty, Bedford Road - Principal

December 4, 2007

Ms. Amber Mosewich
University of Saskatchewan
College of Kinesiology
University of Saskatchewan
adm693@mail.usask.ca

Dear Amber:

Thank you for your email seeking support for your project entitled, *Adolescent women athletes' sport experiences: Self-conscious emotions, self-compassion, and self-evaluative thoughts and behaviours.*

Please be advised that your request to conduct research and contact young women in Grades 9 to 12 involved in high school sport has been approved. I understand that coaches will be required to administer and collect consent and assent forms from their athletes and work with the research team to set up a time for the data collection and presentation.

We wish you good luck with your project and would appreciate receiving the results of the research when the project has been completed.

Sincerely,

Shirley Dowie
Superintendent
Schools and Learning

SD/ba

cc: Bruce Brooks, Principal – Martensville High School
Michael Collins, Principal – Warman High School
Sandra Pearson, Principal – Clavet Composite School

Email Communication (Thursday, December 20, 2007, 09:48:50):

Dear Amber,

On behalf of Marc Danylchuk, Director of Education for Horizon School Division, I am pleased to inform you that your request to conduct a research study in Horizon School Division has been approved. This approval is contingent on the approval from the principal of the two schools, namely Cheri Jordan (cheri.jordan@hzsd.ca) at Lanigan Central High School and Rob McGregor (rob.mcgregor@hzsd.ca) at Winston High School in Watrous. A further requirement will be the consent of the parents of the students participating in the study.

We ask that you contact the principals of the schools directly to receive their consent.

All the very best with your research. Wishing you a Merry Christmas and all the very best for 2008!

~Becky

Becky Hoehn
Executive Assistant/Communications Officer
Horizon School Division No. 205
A Community of Learning and Achieving

APPENDIX N

Parental Consent Form

UNIVERSITY OF SASKATCHEWAN
PARENTAL CONSENT FORM

Your daughter is invited to participate in a study entitled: **Adolescent women athletes' sport experiences: Self-conscious emotions and self-evaluative thoughts and behaviours.**

Please read this form carefully, and feel free to ask questions you might have.

Researchers:

Dr. Kent Kowalski
College of Kinesiology
University of Saskatchewan
Phone: 966-1079
Email: kent.kowalski@usask.ca

Amber D. Mosewich
College of Kinesiology
University of Saskatchewan
Phone: 966-1123
Email: adm693@mail.usask.ca

Purpose and Procedure: The purpose of the study is to learn about adolescent women athletes' experiences in sport by exploring the relationship between the emotions and various self-evaluative thoughts and behaviours.

The study will require your daughter to complete a short questionnaire package, which should take approximately 20 to 30 minutes to complete. This is not part of your daughter's regular school or sport programming (regular activities would include practices, games, or classes), and it is optional. The package includes general demographical information, as well as questions regarding sport involvement and different emotions and behaviours. The questionnaire is to be completed at your daughter's school before, during, or after practice, at a time that is convenient for your daughter and her coach. The questionnaire is to be completed individually in a team setting. The findings will be used to complete a Master's thesis project and the results will be presented at the College of Kinesiology at the University of Saskatchewan. The results will also be submitted to a scholarly journal for publication and will be made available to any interested parties (e.g., coaches, teachers, athletes, parents, etc.) upon request. The data will be reported in aggregate form, so your daughter's responses will be kept anonymous and confidential.

Potential Benefits: Although no benefits of participation in the study can be guaranteed, there is the potential for participation to enable the development for an increased understanding about the role of the self-conscious emotions in adolescent women athletes' sport experiences. Additionally, the option for the team to participate in a presentation on a sports science topic (most likely in the area of sport psychology) will be provided. This presentation will be designed to provide the team with knowledge to help them in their sport endeavors.

Potential Risks: This study will not subject your daughter to any physical risk. She can refuse to answer any question in the questionnaire package and doing so will result in no penalty to her or anyone else. Although we do not expect any psychological risk, if we feel participation is placing her under undo stress we will discontinue her involvement in the study, again resulting in no penalty. Any data collected prior to this point will be omitted from the study and destroyed. In the event that your daughter would like to further discuss her feelings regarding the topic, Mental Health Services can be of assistance. They can be contacted at (306) 655-7950. She could also talk to her school counsellor.

Storage of Data: All questionnaires will be stored in the secure office of Dr. Kent Kowalski at the University of Saskatchewan for a minimum of five years after the publication of the findings. After this time, the questionnaires will be destroyed.

Confidentiality: Although the data from this research project will be published and presented at conferences, the data will be reported in aggregate form, so that it will not be possible to identify individuals. Moreover, the Consent Forms will be stored separately from the questionnaires, so that it will not be possible to associate a name with any given set of responses. It is asked that your daughter not put her name or other identifying information on the questionnaire package.

Right to Withdraw: Your daughter's participation is voluntary, and she can answer only those questions that she is comfortable with. There is no guarantee that she will personally benefit from her involvement. The information that is shared will be held in strict confidence and discussed only with the research team. She may withdraw from the research project for any reason, at any time, without penalty of any sort and the decision to withdraw will not effect grades, playing time, or rapport with the coach. If she withdraws from the research project before handing in her questionnaire, any data that she has contributed will be destroyed at her request. However, after she has handed in her questionnaire, she will not have the option to withdraw her responses because no identifying information is recorded and there will be no way to determine which questionnaire was the she filled out.

Questions: If you have any questions concerning the research project, please feel free to ask at any point; you are also free to contact the researchers at the numbers provided if you have any other questions. This research project has been approved on ethical grounds by the University of Saskatchewan Behavioural Sciences Research Ethics Board on September 4, 2007. Any questions regarding your daughter's rights as a participant may be addressed to that committee through the Ethics Office (966-2084). Out of town participants may call collect.

Follow-up or Debriefing: A copy of the completed manuscript will be available upon request to the researchers.

Consent to Participate: I have read and understood the description provided; I have been provided with an opportunity to ask questions and my/our questions have been answered. I consent to having my daughter, _____, participate in the research project, understanding that I may withdraw this consent at any time. A copy of this consent form has been given to me for my records.

_____ _____

(Name of Parent, Guardian, or Caregiver) (Date)

_____ _____

(Signature of Parent, Guardian, or Caregiver) (Signature of Researcher)

APPENDIX O

Participant Assent Form

UNIVERSITY OF SASKATCHEWAN
Participant Assent Form

You are invited to participate in a study entitled: **Adolescent women athletes' sport experiences: Self-conscious emotions and self-evaluative thoughts and behaviours.** Please read this form carefully, and feel free to ask questions you might have.

Researchers:

Dr. Kent Kowalski
College of Kinesiology
University of Saskatchewan
Phone: 966-1079
Email: kent.kowalski@usask.ca

Amber D. Mosewich
College of Kinesiology
University of Saskatchewan
Phone: 966-1123
Email: adm693@mail.usask.ca

What is this study about? This study deals with adolescent women athletes' experiences in sport by exploring the relationships between the emotions and various self-evaluative thoughts and behaviours.

Do I have to participate? Participation in this study is completely voluntary and optional and is not part of your regular involvement in high school sport (regular involvement includes activities such as practices or games).

What will I have to do if I become involved? If you want to become involved, you will be required to complete a short questionnaire package, which should take approximately 20 to 30 minutes to complete. The package includes general demographical information, questions regarding sport involvement and different emotions and behaviours. The questionnaire is to be completed at your school before, during, or after practice, at a time that is convenient for you and your coach. The questionnaire is to be completed individually.

Are there any risks involved? There are no physical or psychological risks in the study. You have the right to refuse to answer any question. You are free to answer only those questions with which you are comfortable. Not answering a question or withdrawing from the study will result in no penalty to you or anyone else. If you wish, any data collected prior to this point will be omitted from the study and destroyed. In the event that you would like to further discuss your feelings regarding the issues in the study, Mental Health Services can assist you. They can be contacted at (306) 655-7950. You could also talk to your school counsellor.

Are there any benefits to doing this study? Although no benefits of participation in the study can be promised, little research in this area has been conducted with females, so the knowledge from this study may be beneficial to you and other women athletes, as well as parents and coaches. Additionally, the option for the team to participate in a presentation on a sports science topic (most likely in the area of sport psychology/mental skills training) will be provided.

Will other people know who I am or what I said? The data from the study will be used to produce a research paper that might be published or presented at a conference. However, *your*

identity will be kept confidential. Only the research team will review the data. No other athletes, parents, or coaches will see the original data. Also, you are asked to not to put your name on the questionnaire package, which will keep your responses anonymous (i.e., no one will be able to tie the responses to you).

Can I drop out of the study? Your participation is voluntary, and you may withdraw from (drop out of) the study for any reason, at any time, without penalty of any sort and the decision to withdraw will not affect any of your current or future activities. No one will be angry or upset if you drop out. If you withdraw from the study at any time, any data that you have contributed will be destroyed if you want. However, after you have handed in your questionnaire, you will not have the option to withdraw your responses because no identifying information is recorded and there will be no way to determine which questionnaire was the one you filled out. You may choose to not answer individual questions, again without any penalty. You will be told of any new information that may influence your decision to participate.

What if I have a question about the study? If you have any questions concerning the research project, please feel free to ask at any point; you are also free to contact the researchers at the numbers provided if you have any other questions. This research project has been approved on ethical grounds by the University of Saskatchewan Behavioural Sciences Research Ethics Board on September 4, 2007. Any questions regarding your rights as a participant may be addressed to that committee through the Ethics Office (966-2084). Out of town participants may call collect.

You may contact the research team to find out the results of the study or to provide more input. A copy of the published paper can also be requested.

Assent to Participate: I have read and understood the description provided; I have been provided with an opportunity to ask questions and my/our questions have been answered. I consent to participate in the research project, understanding that I may withdraw this consent at any time. A copy of this assent form has been given to me for my records.

_____	_____
(Name of Participant)	(Date)
_____	_____
(Signature of Participant)	(Signature of Researcher)

APPENDIX P

Descriptive Statistics and Subscale Reliabilities for the Self-Compassion Scale (SCS)

Descriptives and reliabilities for the Self-Compassion Scale (SCS)

Variable	# Items	Scale Range	Mean	SD	Reliability α
Self-Compassion (SCS)	26	1-5	2.97	0.52	.87
SCS Subscales:					
Self-Kindness	5	1-5	2.96	0.70	.69
Self-Judgement	5	1-5	2.85	0.78	.77
Common Humanity	4	1-5	2.98	0.79	.68
Isolation	4	1-5	2.95	0.77	.65
Mindfulness	4	1-5	3.12	0.72	.64
Overidentification	4	1-5	2.95	0.78	.57

Note. N = 151. Scale Range refers to the lowest and highest possible score on each scale.

APPENDIX Q

Complete Correlation Table

Pearson product moment correlations among TOSCA-A, Pride scales, SCS and subscales, RSES, SPAS, OEQ and subscales, OBC-Youth and subscales, PFAI-S, and FNE

Variable	1a.	1b.	2a.	2b.	3a.	3b.	3c.	3d.	3e.	3f.	3g.	4.	5.	6a.	6b.	6c.	6d.	7a.	7b.	7c.	8.	9.
TOSCA-A																						
1a. Shame	----																					
1b. Guilt	.32**	----																				
PRIDE SCALES																						
2a. Authentic	-.10	.15	----																			
2b. Hubristic	-.02	-.36**	-.21*	----																		
3a. SCS	-.32**	.15	.42**	-.09	----																	
3b. Self-kindness	-.19*	.20*	.37**	-.11	.71**	----																
3c. Self-judgement	-.31*	.06	.40**	-.10	.77**	.48**	----															
3d. Common humanity	-.08	.17*	.13	-.07	.58**	.41**	.21*	----														
3e. Isolation	-.25*	.01	.26**	-.03	.74**	.37**	.62**	.18*	----													
3f. Mindfulness	-.16	.17*	.30**	-.02	.70**	.53**	.33**	.48**	.34**	----												
3g. Overidentification	-.32	.01	.20*	-.05	.66**	.24**	.54**	.12	.54**	.29**	----											
4. RSES	-.29**	.11	.72**	-.24**	.60**	.44**	.58**	.18*	.47**	.47**	.38**	----										
5. SPAS	.14	-.02	-.39**	.04	-.37**	-.37*	-.35**	-.04	-.27**	-.22**	-.28**	-.52**	----									
6a. OEQ	.14	.16	.12	.01	.04	.02	-.22**	.19*	.02	.22**	-.07	.05	.18*	----								
6b. Emotional element	.22**	.15	-.05	.10	-.16	-.16	-.37**	.17*	-.17*	.08	-.20	-.25**	.40**	.76**	----							
6c. Frequency/Intensity	-.01	.17*	.23**	-.12	.10	.08	-.06	.18*	.03	.18*	-.00	.22**	.01	.75**	.39**	----						
6d. Preoccupation	.22**	.16	.09	.09	.16	.10	-.11	.23**	.12	.29**	.03	.10	.12	.74**	.50**	.41**	----					
7a. OBC-Youth	.14	-.20*	-.34**	.32**	-.54**	-.41**	-.61**	-.09	-.43**	-.25**	-.43**	-.54**	.58**	.21**	.46**	.01	.14	----				
7b. Body surveillance	.13	-.13	-.29**	.23**	-.50**	-.40**	-.57**	-.07	-.40**	-.23*	-.39**	-.42**	.45**	.22**	.37**	.11	.15	.86**	----			
7c. Body shame	.12	-.21*	-.31**	.32**	-.46**	-.34**	-.51**	-.09	-.36**	-.21**	-.38**	-.53**	.56**	.17*	.44**	-.08	.11	.90**	.56**	----		
8. PFAI-S	.26**	-.16	-.38**	.20*	-.57**	-.42**	-.49**	-.19*	-.52**	-.31**	-.42**	-.51**	.45**	.09	.31**	-.03	.08	.59**	.55**	.50**	----	
9. FNE	.21**	-.07	-.37**	.21**	-.48**	-.34**	-.47**	-.06	-.44**	-.25**	-.44**	-.47**	.61**	.17*	.36**	.06	.12	.68**	.66**	.54**	.56**	----

Note. * p <.05. ** p <.01. Pride Scales refer to Authentic and Hubristic Pride Scales. Item 3a takes into account the entire SCS scale, while items 3b-3g are subscales of the SCS. Item 6a takes into account the entire OEQ, while items 6b-6d are subscales of the OEQ. Item 7a takes into account the entire OBC, while items 7b and 7c are subscales of the OBC.

APPENDIX R

Derivation of Regression Equations and Post-hoc Analysis for Significant Interactions

Derivation of Regression Equations and Post-hoc Analysis for Significant Interactions

Regression Equations for Plotting the Significant SHAMExSELF-COMPASSION Interaction Effect on OEQ (with Self-compassion and Shame Centred):

Initial regression equation:
$Y = (b_1)X + (b_2)Z + (b_3)XZ + b_0$

The regression equation can be rewritten as:
$\hat{Y} = (b_1 + b_3)X + (b_2Z + b_0)$

Z low:
$\hat{Y} = [2.49 + (-7.11)(-.524)]X + [(2.44)(-.524) + 49.37]$
$= 6.22\ X + 48.09$
$X_{L(-.541)} = 44.72$ $X_{M(0)} = 48.09$ $X_{H(.541)} = 51.46$

Z moderate (mean):
$\hat{Y} = [2.49 + (-7.11)(0)]X + [(2.44)(0) + 49.37]$
$= 2.49\ X + 49.37$
$X_{L(-.541)} = 48.02$ $X_{M(0)} = 40.37$ $X_{H(.541)} = 50.72$

Z high:
$\hat{Y} = [2.49 + (-7.11)(.524)]X + [(2.44)(.524) + 49.37]$
$= -1.24\ X + 50.65$
$X_{L(-.541)} = 51.32$ $X_{M(0)} = 50.65$ $X_{H(.541)} = 49.98$

Where:

$\hat{Y}$ = OEQ
X = shame (standard deviation = .541)
Z = self-compassion (standard deviation = .524)

Unstandardized regression coefficients
b_1 = shame = 2.49
b_2 = self-compassion = 2.44
b_3 = interaction = -7.11
b_0 = constant = 49.37

Zmean = mean of self-compassion = 0.00
Z high = Z mean + 1 standard deviation = -.524†
Z low = Z mean - 1 standard deviation = .524†

X_L = 1 standard deviation below X mean = -.541†
X_M = X mean = 0.00
X_H = 1 standard deviation above X mean = .541†

† Calculated using z-scores

$$\textit{z-score for Z variable} = \frac{Z - Zmean}{\textit{standard deviation}}$$

$$\textit{z-score for X variable} = \frac{X - Xmean}{\textit{standard deviation}}$$

Post-hoc Analysis:

Variance-covariance matrix (from SPSS):

$S_{11} = 2.218$
$S_{13} = 0.352$
$S_{33} = 5.465$

Standard error:

$S_b = \sqrt{S_{11} + 2 Z s_{13} + Z^2 s_{33}}$

Z high: $S_b = \sqrt{(2.218) + 2 (.524)(.352) + (.524)^2 (5.468)}$
$= \sqrt{2.218 + .369 + 1.50}$
$= 2.02$

Z mean: $S_b = \sqrt{(2.218) + 2 (0)(.352) + (0)^2 (5.468)}$
$= \sqrt{2.218}$
$= 1.49$

Z low: $S_b = \sqrt{(2.218) + 2 (-.524)(.352) + (-.524)^2 (5.468)}$
$= \sqrt{2.218 - .369 + 1.50}$
$= 1.83$

df = $n - k - 1$
$= 151 - 3 - 1$
$= 147$ therefore +/- 1.96 is significant

$t\text{-test} = \frac{\text{simple slope}}{S_b}$

High:

$t = \frac{-1.24}{2.02}$
$= -.061$ - not significantly different from zero

Mean:

$t = \frac{2.49}{1.49}$
$= 1.67$ – not significantly different from zero

Low:

$t = \frac{6.21}{1.83}$
$= 3.39$ - significantly different from zero

Regression Equations for Plotting the Significant SHAMExSELF-COMPASSION Interaction Effect on OEQ Frequency and Intensity (with Self-compassion and Shame Centred):

Initial regression equation:
$Y = (b_1)X + (b_2)Z + (b_3)XZ + b_0$

The regression equation can be rewritten as:
$\hat{Y} = (b_1 + b_3)X + (b_2Z + b_0)$

Z low:
$\hat{Y} = [-.008 + (-1.68)(-.524)]X + [(.65)(-.524) + 12.04]$
$= 0.87\ X + 11.70$
$X_{L(-.541)} = 11.23$ $X_{M(0)} = 11.70$ $X_{H(.541)} = 12.17$

Z moderate (mean):
$\hat{Y} = [-.008 + (-1.68)(0)]X + [(.65)(0) + 12.04]$
$= -0.008\ X + 12.04$
$X_{L(-.541)} = 12.04$ $X_{M(0)} = 12.04$ $X_{H(.541)} = 12.04$

Z high:
$\hat{Y} = [-.008 + (-1.68)(.524)]X + [(.65)(.524) + 12.04]$
$= -0.89\ X + 12.38$
$X_{L(-.541)} = 12.86$ $X_{M(0)} = 12.38$ $X_{H(.541)} = 11.90$

Where:

$\hat{Y}$ = OEQ Frequency and intensity
X = shame (standard deviation = .541)
Z = self-compassion (standard deviation = .524)

Unstandardized regression coefficients
b_1 = shame = -.008
b_2 = self-compassion = .650
b_3 = interaction = -1.68
b_0 = constant = 12.04

Zmean = mean of self-compassion = 0.00
Z high = Z mean + 1 standard deviation = -.524†
Z low = Z mean - 1 standard deviation = .524†

X_L = 1 standard deviation below X mean = -.541†
X_M = X mean = 0.00
X_H = 1 standard deviation above X mean = .541†

† Calculated using z-scores

$$\textit{z-score for Z variable} = \frac{Z - Zmean}{\textit{standard deviation}}$$

$$\textit{z-score for X variable} = \frac{X - Xmean}{\textit{standard deviation}}$$

Post-hoc Analysis:

Variance-covariance matrix:
$s_{11} = 0.121$
$s_{13} = 0.019$
$s_{33} = 0.297$

Standard error:

$S_b = \sqrt{s_{11} + 2 Z s_{13} + Z^2 s_{33}}$

Z high: $S_b = \sqrt{(.121) + 2 (.524)(.019) + (.524)^2 (.297)}$
$= \sqrt{.121 + .02 + .08}$
$= .47$

Z mean: $S_b = \sqrt{(.121) + 2 (0)(.019) + (0)^2 (.297)}$
$= \sqrt{.121}$
$= .35$

Z low: $S_b = \sqrt{(.121) + 2 (-.524)(.019) + (-.524)^2 (.297)}$
$= \sqrt{.121 - .02 + .08}$
$= .43$

df = $n - k - 1$
$= 151 - 3 - 1$
$= 147$ therefore +/- 1.96 is significant

$t\text{-test} = \frac{\text{simple slope}}{S_b}$

High:

$t = \frac{-.89}{.47}$
= -1.89 - not significantly different from zero

Mean:

$t = \frac{-.008}{.35}$
= -.02 – not significantly different from zero

Low:

$t = \frac{.87}{2.02}$
= 2.02 - significantly different from zero

APPENDIX S

Description of the Derivation of Interaction Calculations

Instructions for probing significant interactions in regression equations (from Aiken & West, 1991)

Once it has been determined that a significant interaction has been found, interpreting the interaction effect helps to further understand the meaning of the interaction. There are two steps involved in examining the interaction: plotting the interaction and post hoc statistical probing. Each of these steps is outlined in detail in the following section and are based on recommendations by Aiken and West (1991). This section has been included for future graduate students who might be reading this thesis to guide an interested reader through the process of probing significant interactions. The data used in this example corresponds to the significant shame by self-compassion interaction effect on OEQ, which presented in Appendix R but is outlined in more detail below.

Note: Z and X are centred for this analysis.

For this example:
Criterion variable = $\hat{Y}$ = OEQ
Predictor variable = X = shame
Predictor variable = Z = self-compassion

Step 1: Plotting the interaction

1. The regression equation must be rewritten as the regression of the criterion on one predictor. Simple algebra allows for a different expression of the regression of Y on X at levels of Z:

Initial regression equation:

$$Y = (b_1)X + (b_2)Z + (b_3)XZ + b_0$$

The regression equation can be rewritten as:

$$\hat{Y} = (b_1 + b_3)X + (b_2Z + b_0)$$

In the restructured equation, the slope of the regression of Y on X, or $(b_1 + b_3)$, depends on the value of Z at which the slope is considered. $(b_1 + b_3)X$ is the simple slope of the regression of Y on X at Z.

2. Values of Z must be chosen to substitute into this new restructured equation. In this study, since Z is continuous, any value within the full range of Z can be used. Cohen and Cohen (1983) have suggested using three values: Z mean (the mean of Z), Z low (one standard deviation below the mean), and Z high (one standard deviation above the mean). These are calculated using z-scores.

z-score for Z variable = $\frac{Z - Zmean}{standard\ deviation}$

In this study:

Zmean = mean of self-compassion = 0.00
Z high = Z mean + 1 standard deviation = -.524
Z low = Z mean - 1 standard deviation = .524

$1 = \frac{Z\ high - 0}{.524}$
Z high = .524

$-1 = \frac{Z\ low - 0}{.524}$
Z low = -.524

3. Values for X must also be calculated to substitute into the regression equation. Again, X_M (the mean of X), X_L (one standard deviation below the mean), and X_H (one standard deviation above the mean) are used. These are calculated using z-scores.

z-score for X variable = $\frac{X - Xmean}{standard\ deviation}$

In this study:

X_M = X mean of OEQ= 0.00
X_L = 1 standard deviation below X mean = -.541
X_H = 1 standard deviation above X mean = .541

$1 = \frac{X_H - 0}{.524}$
X_H = .524

$-1 = \frac{X_L - 0}{.524}$
X_L = -.524

4. Unstandardized regression coefficients are obtained from the SPSS output.

In this study:

Unstandardized regression coefficients:
b_1 = shame = 2.49

b_2 = self-compassion = 2.44
b_3 = interaction = -7.11
b_0 = constant = 49.37

5. Values are substituted into the equation. First, the regression coefficients and Z values are substituted into the equation, resulting in a Y = m x + b equation (note that m = slope and b = y-intercept). Second, each of the three X values are individually substituted into the equation, resulting in three points each for Z low, Z mean, and Z high.

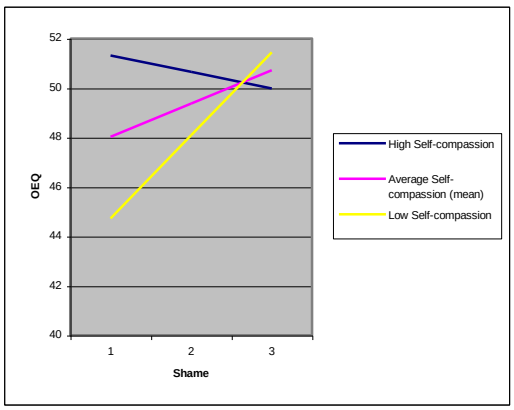
$\hat{Y} = (b_1 + b_3)X + (b_2Z + b_0)$

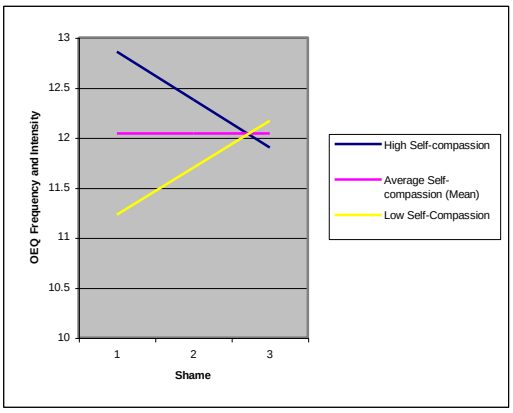
Z low:
$\hat{Y} = [2.49 + (-7.11)(-.524)]X + [(2.44)(-.524) + 49.37]$
$= 6.22\ X + 48.09$
$X_{L(-.541)} = 44.72$ $X_{M(0)} = 48.09$ $X_{H(.541)} = 51.46$

Z moderate (mean):
$\hat{Y} = [2.49 + (-7.11)(0)]X + [(2.44)(0) + 49.37]$
$= 2.49\ X + 49.37$
$X_{L(-.541)} = 48.02$ $X_{M(0)} = 40.37$ $X_{H(.541)} = 50.72$

Z high:
$\hat{Y} = [2.49 + (-7.11)(.524)]X + [(2.44)(.524) + 49.37]$
$= -1.24\ X + 50.65$
$X_{L(-.541)} = 51.32$ $X_{M(0)} = 50.65$ $X_{H(.541)} = 49.98$

6. Lines for Z low, Z mean, and Z high can be plotted (either by hand or in a computer program such as Microsoft Excel). The graph can be examined visually for trends.





Step 2: Post hoc probing

Once the interaction has been graphed, we want to know if for a specific value of Z, the regression of Y on X significantly different from zero (i.e., is the slope different from zero). This process requires the calculation of the standard errors of the simple slopes of simple regression equations so that *t*-tests for the significance of the simple slopes can be calculated.

1. Calculate the standard error of the simple slope using values from the variance-covariance matrix of the regression coefficients (provided by SPSS if you select the covariance option).

In this study:

Variance-covariance matrix:

	b_1	b_2	b_3
b_1	**2.218 = $b_{1\,1}$**	0.673	**.352 = $b_{1\,3}$**
b_2	0.673	2.421	-0.647
b_3	0.352	-0.647	**5.468 = $b_{3\,3}$**

Standard error is calculated using the following formula:

$$S_b = \sqrt{S_{1\,1} + 2\,Z\,s_{1\,3} + Z^2\,s_{3\,3}}$$

In this study:

Z high: $S_b = \sqrt{(2.218) + 2\,(.524)(.352) + (.524)^2\,(5.468)}$
$= \sqrt{2.218 + .369 + 1.50}$
$= 2.02$

Z mean: $S_b = \sqrt{(2.218) + 2\,(0)(.352) + (0)^2\,(.5468)}$
$= \sqrt{2.218}$
$= 1.49$

Z low: $S_b = \sqrt{(2.218) + 2\,(-.524)(.352) + (-.524)^2\,(5.468)}$
$= \sqrt{2.218 - .369 + 1.50}$
$= 1.83$

2. The *t*-test for whether the simple slope differs from zero is calculated by taking the value of the simple slope divided by its standard error. Degrees of freedom = (*n* – *k* – 1), where *n* is the number of cases and *k* is the number of predictors, not including the regression constant.

In this study:

df = $n - k - 1$
= 151 – 3 –1
= 147 – therefore +/- 1.96 is significant (When *N* values are large (df > 120), a score of +/- 1.96 corresponds to a significance value of p < .05 [Vincent, 2005]).

$$t\text{-test} = \frac{\text{simple slope}}{S_b}$$

Slopes (calculated in Step 1):
H = -1.24
M = 2.49
L = 6.21

High:

$$t = \frac{-1.24}{2.02}$$
= -.061 - not significantly different from zero

Mean:

$$t = \frac{2.49}{1.49}$$
= 1.67 – not significantly different from zero

Low:

$$t = \frac{6.21}{1.83}$$
= 3.39 - significantly different from zero. The simple slope for low self-compassion is significantly different from zero for OEQ and shame. At low levels of self-compassion, there is a positive relation between OEQ and shame.